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ABSTRACT

The Educational Testing Service has initiated the development of a new series of tests to be used as part of the process states use to license or certify their teachers. Stage I of this new generation of tests will determine whether teachers possess an acceptable level of competence in the enabling skills the beginning teacher requires. This report describes the research study that was conducted to identify the enabling skills content domain for Stage I assessments. Job analysis was used to identify the core of important skills. A domain of skills was defined through literature review and advice from experts. The second phase was to verify the judgments of content experts through a large-scale survey of 289 state education officials, 2,269 elementary and secondary school teachers, and a supplemental groups of 236 Black and Hispanic teachers. Of the 134 defined enabling skills, only 3 were judged to be of little or no importance by more than 20% of the teachers, and 113 were determined to be important by all respondent groups. These findings may be used in test construction. Eighteen appendixes present supplemental information, including the survey. Twenty-three tables present study information. (Contains 25 references.) (SLD)

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# IDENTIFICATION OF A CORE OF IMPORTANT ENABLING SKILLS FOR THE NTE SUCCESSOR STAGE I EXAMINATION

Michael Rosenfeld
Richard J. Tannenbaum

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Educational Testing Service
Princeton, New Jersey
May 1991

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# IDENTIFICATION OF A CORE OF IMPORTANT ENABLING SKILLS FOR THE NTE SUCCESSOR STAGE I EXAMINATION*

By

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May 1991

* Research for this new series of assessments began before the name The Praxis Series: Professional Assessments for Beginning Teachers™ was made official. Throughout this paper, therefore, the assessments are referred to as the Successor to the NTE.

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Acknowledgments

We would like to extend our gratitude to the many individuals and associations that contributed to this project. In particular we would like to recognize the members of the External Review Panel and National Advisory Committee who helped identify and define the enabling skills domain. Our gratitude also extends to the many associations that provided us with the names and addresses of participants for the survey portion of this project: National Association of State Directors of Teacher Education and Certification, American Association of Colleges for Teacher Education, National Association of Elementary School Principals, National Association of Secondary School Principals, American Association of School Administrators, National Parent Teacher Association, National Association of State Boards of Education, National School Board Association, National Education Association, and American Federation of Teachers. Our appreciation also goes out to the nearly 2,900 respondents who took time from their extremely busy schedules to complete the survey. Clearly, without your dedication to the teaching profession, this project could not have been successfully carried out. Although many individuals at ETS assisted in this project, special recognition goes to Cindy Hammell who had the dubious distinction of constructing and reconstructing and re-reconstructing, without skipping a beat, the myriad of tables and appendices included in this report.

# IDENTIFICATION OF A CORE OF IMPORTANT ENABLING SKILLS FOR THE NTE SUCCESSOR STAGE I EXAMINATION

## Executive Summary

Michael Rosenfeld and Richard J. Tannenbaum

## Introduction

In light of recent national debates about the preparedness and effectiveness of teachers, and advances in measurement, psychological and educational research, and technology, Educational Testing Service (ETS) has initiated the development of a new teacher assessment system. This new assessment system is designed to be used as part of the process implemented by states to license or certify their teachers. This new generation of tests will consist of three stages. The Stage I tests are designed to be used by a state to decide whether prospective teachers possess an acceptable level of competence in the enabling skills the state requires of the beginning teacher. These may be conceptualized as those skills (e.g., reading, writing, and mathematics) that serve as the foundation for teacher development and practice and are judged to be important for teachers regardless of school level or subject matter taught. The Stage II tests will measure subject-matter knowledge, pedagogy, and, in some disciplines, subject-matter pedagogy. Included among these tests are the Spanish examination for Spanish teachers, the Mathematics examination for mathematics teachers, and the Physics examination for Physics teachers. Stage III tests will measure the beginning teacher's knowledge and application of pedagogy (Dwyer, 1989).

This report describes the research study that was conducted to identify the enabling skills content domain to be considered for the Stage I assessment measures. The purpose of this study was to define a domain of enabling skills that a wide range of practicing professionals (e.g., teachers, administrators, principals, state department of education officials) and school-related community groups (e.g., National Parent Teacher Association) believed were important for all entry-level teachers regardless of school level or subject matter taught. The objective was to provide test development committees with a core of enabling skills that all relevant groups agreed were important for all entry-level teachers. This identified core would then serve as the content pool from which the Stage I test specifications would be developed.

## Method

Job analysis was used to identify the core of important enabling skills. It consisted of two major phases. The first phase was designed to define a domain of important enabling skills. This was accomplished through literature reviews, interviews with members of relevant constituencies, and committees of content experts. The second phase was designed to verify the judgments of the content experts and to identify a core of important enabling skills relevant for all entry-level teachers. This verification was accomplished through a large-scale survey administration of the enabling skills domain to practicing teachers and constituent groups who were asked to judge the importance of each enabling skill for all entry-level teachers regardless of subject matter or grade taught. These two phases are described below.

Phase I: Definition of a Domain of Important Enabling Skills

Step 1. A preliminary description of an enabling skills domain was constructed by ETS Test Development staff. This draft was the product of reviews of relevant professional literature, existing examinations dealing with teaching skills, enabling skills required by various states as part of their licensing requirements, and Test Development staffs' own expertise in the field of teaching and teacher assessment. This draft description consisted of 119 specific enabling skills clustered within five dimensions: (1) Reading, (2) Writing, (3) Mathematics, (4) Listening, and (5) Speaking.

Step 2. This preliminary domain description was reviewed by an External Review Panel of 21 practicing professionals. These professionals were teachers, principals, deans or associate deans of education, state directors of teacher education and certification, and state representatives from the National Parent Teacher Association. These individuals were recommended by their respective professional associations. They were asked to review the draft domain in terms of the adequacy of its overall structure and the relevance of the specific enabling skills for all entry-level teachers. They were also asked to add and/or delete enabling skills as they believed to be necessary in order to appropriately define the enabling skills domain. Their comments were obtained through telephone interviews. The draft was revised based on those comments.

Step 3. The revised draft description was then reviewed by a 12 member National Advisory Committee. The members of this committee were selected from the same constituencies that comprised the External Review Panel and had representation by sex, race, and geographic region. The members of the committee were mailed the draft description and asked to review it and to be prepared to discuss their revisions during a two-day meeting at ETS. The goal of the meeting was to obtain consensus of what, in their expert opinions, constituted a domain of important enabling skills relevant for all entry-level teachers. In addition to minor structural changes, one new dimension was added to the enabling skills domain, Interactive Communication Skills. The resulting domain of important enabling skills was then verified through a large-scale survey by several thousand practicing professionals including teachers and representatives of various constituencies.

Phase II: Identification of the Core of Important Enabling Skills for Entry-Level Teachers

Survey methodology was used to verify the judgments of the committees of content experts and identify the core of important enabling skills from within the defined content domain.

Importance Rating Scale. In accordance with established professional standards (see Principles for the Validation and Use of Personnel Selection Procedures, 1987; Standards for Educational and Psychological Testing, 1985), an importance scale was used in the survey to evaluate the enabling skills of the content domain. The scale is presented below. Comparable 5-point-anchor descriptors have been used in other job analytic studies (see Schneider & Konz, 1989; Silvestro, Clayton, & Glenn, 1989). This scale was reviewed and approved by the National Advisory Committee.

Regardless of the subject-matter area or grade they teach, how important is it that all entry-level teachers be able to do the following?

(1) Of no importance
(2) Of little importance
(3) Moderately important
(4) Very important
(5) Extremely important

Pilot Test. Prior to the large scale administration of the job analysis survey, it was pilot tested on six experienced teachers (two elementary, two middle, and two secondary) in the New Jersey and Pennsylvania areas. The pilot test was conducted to determine if the content of the survey was clear and understandable and if the survey instructions and format needed to be modified. A copy of the survey was mailed to the teachers, and their comments were obtained via a telephone interview conducted by an ETS staff member. Revisions to the survey instrument were made based upon the feedback of the pilot test participants.

Final Survey Format. The final version of the survey consisted of three parts. Part I included the enabling skills that were to be rated using the importance scale. This section consisted of 134 enabling skill statements clustered within six dimensions: (1) Reading, (2) Writing, (3) Mathematics, (4) Listening, (5) Speaking, and (6) Interactive Communication Skills. Also included in Part I was a section that provided respondents with the opportunity to add additional dimensions and specific enabling skills they believed should have been included in the survey and a section that asked respondents to indicate how well the enabling skills within each of the six dimensions were covered in the survey. Part II was designed to obtain respondent judgments as to how much emphasis they believed the examination should place on each of the six enabling skill dimensions. Part III was comprised of demographic descriptors that were used to characterize the survey respondents and, where appropriate, to conduct subgroup analyses (i.e., do the different demographic groups of respondents agree in their ratings of enabling skill importance).

## Survey Participants

Three groups of practicing professionals were selected for participation in the survey: (1) state officials from 10 constituencies involved in teaching, teacher education, licensing and certification, and school-related community organizations (n=289); (2) elementary, middle, and secondary school teachers from each of the 50 states and the District of Columbia (n=2,269); and (3) a supplementary group of Black and Hispanic teachers (included to ensure adequate minority representation) from the elementary, middle, and secondary school levels (n=236).

## Survey Administration

The surveys were administered during the months of May 1989 through January 1990. Each survey was accompanied by a postage-paid return envelope and a letter of invitation to participate in the survey. Each survey administration was followed, within approximately one week, by a postcard reminding the participants to complete and return the survey.

## Data Analysis

Frequency distributions of importance ratings were computed for each enabling skill by the three respondent groups to determine the percent of respondents who judged each enabling skill to be of little importance (scale value of 2) or of no importance (scale value of 1). Mean importance ratings were also computed for each enabling skill by the three respondent groups and by relevant subgroups of teachers. The subgroup analyses were conducted to determine if the judged importance of the enabling skills differed by relevant subgroups of teachers (e.g., male and female; Hispanic and White). It was decided by ETS staff that to be considered eligible for inclusion in the Stage I assessment measures, fewer than 20% of the respondents should judge an enabling skill to be of little importance or of no importance, and its mean importance rating should be at least 3.50 (the midpoint between moderately important and very important). The reliability of the importance ratings of the three respondent groups was also computed. Finally, profiles of mean importance ratings were correlated to determine the extent to which the three respondent groups and the relevant subgroups of teachers agreed in their perceptions of the relative importance of the enabling skills.

# Results

## Frequency Analyses

Across all three groups of respondents, only 3 of the 134 enabling skills (less than 3% of the domain) were judged to be of little or no importance by more than 20% of the respondents. Therefore, according to the frequency standard, approximately 98% of the enabling skills domain may be considered to be eligible for inclusion in the Stage I assessment measures.

## Mean Analyses

Across all three groups of respondents, only 6 of the 134 enabling skills (less than 5% of the domain) had a mean importance rating of less than 3.50. In addition to the mean analysis at the aggregate level of the respondent groups, analyses were conducted for teachers by: (1) sex, (2) race/ethnicity, (3) school setting, (4) school level, (5) teaching experience, (6) subject taught, and (7) geographic region. These subgroup analyses revealed 15 additional enabling skills that had a mean importance rating of less than 3.50. In total, 21 of the 134 enabling skills had a mean importance rating of less than 3.50. (These 21 enabling skills subsumed the three skills "flagged" by the frequency analysis described above.) Therefore, approximately 84% of the enabling skills domain may be considered to be eligible for inclusion in the Stage I assessment measures.

## Reliability of Importance Ratings

Group split half correlations and intraclass correlations were computed for the mean ratings of the three groups of respondents. For each of the respondent groups both reliability estimates exceeded .96, indicating that the mean importance ratings are extremely reliable.

Agreement in the Relative Importance of the Enabling Skills

Correlations of the profiles of the 134 mean importance ratings for the three respondent groups and relevant subgroups of teachers were computed. The subgroups of teachers were defined by: (1) sex (male and female); (2) race/ethnicity (Black, White, and Hispanic); (3) school setting (urban, suburban, and rural); (4) school level (elementary, middle, and secondary); (5) teaching experience ($\leq$ 5 yrs, 6-10 yrs, 11-15 yrs, $\geq$ 16 yrs); (6) subjects taught (business and vocational education, social sciences, physical and biological sciences, mathematics and computer science, language arts, and special education); and (7) geographic region (Far West, Southern, Central, and Northeast). High correlations across the three respondent groups and within each of subgroups of teachers indicate agreement with respect to the distributions of the mean importance ratings (i.e., relative importance). In all but two instances the correlations exceeded .90. This indicates that the three respondent groups and all teachers, regardless of sex, ethnicity, school setting, school level, subject taught, and geographic region, agreed in their perceptions of the relative importance of the enabling skills.

## Conclusions

The purpose of this study was to identify a core of important enabling skills for entry-level teachers on which there is substantial agreement by practicing teachers and constituent groups. This core would be used to assist in the development of the Stage I assessment measures. The results of this study clearly indicate that 84% of the enabling skills domain (113 out of 134 enabling skills) was judged to be important by all three respondent groups and by all subgroups of teachers. These findings may be used to support the development of a single Stage I assessment measure that is appropriate for all candidates regardless of sex, race/ethnicity, school setting, school level, subject taught, and geographic region.

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# IDENTIFICATION OF A CORE OF IMPORTANT ENABLING SKILLS FOR THE NTE SUCCESSOR STAGE I EXAMINATION

## Introduction

In light of recent national debates about the preparedness and effectiveness of teachers, and advances in measurement, psychological and educational research, and technology, Educational Testing Service (ETS) has initiated the development of a new teacher assessment system. This new assessment system is designed to be used as part of the process implemented by states to license or certify their teachers. This new generation of tests will consist of three stages. The Stage I tests are designed to be used by a state to decide whether prospective teachers possess an acceptable level of competence in the enabling skills the state requires of the beginning teacher. These may be conceptualized as those skills (e.g., reading, writing, and mathematics) that serve as the foundation for teacher development and practice and are judged to be important for teachers regardless of school level or subject matter taught. The Stage II tests will measure subject- matter knowledge, pedagogy, and, in some disciplines, subject-matter pedagogy. Included among these tests are the Spanish examination for Spanish teachers, the Mathematics examination for mathematics teachers, and the Physics examination for Physics teachers. Stage III tests will measure the beginning teacher's knowledge and application of pedagogy (Dwyer, 1989).

This report describes the research study that was conducted to identify the enabling skills content domain to be considered for the Stage I assessment measures. The purpose of this study was to define a domain of enabling skills that a wide range of practicing professionals (e.g., teachers, administrators, principals, state department of educations officials) and school-related community groups (e.g., National Parent Teacher Association) believed were important for all entry-level teachers regardless of school level or subject matter taught. The objective was to provide test development committees with a core of enabling skills that all relevant groups agreed were important for all entry-level teachers. This identified core would then serve as the content pool from which the Stage I test specifications would be developed.

## Method

The general methodology utilized in this study is commonly referred to as job analysis. The objective of job analytic procedures is to define the tasks and/or knowledge, skills, and abilities required for a specific job. Job analysis is a critical step in the process of establishing the content validity and job-relatedness of assessment measures in general (Schippmann, Hughes, & Prien, 1987; Schneider & Konz, 1989; Thompson & Thompson, 1982; Veres, Lahey, & Buckly, 1987) and licensing and certification examinations in particular (Mehrens, 1987; Shimberg, 1982; Vertiz, 1985).

> The content domain to be covered by a licensure or certification test should be defined clearly and explained in terms of the importance of the content for competent performance in an occupation. . . . Job analyses provide the primary basis for defining the content domain. (Standards for Educational and Psychological Testing, 1985, p. 64).

The job analysis procedures in this study are being used to aid in the definition of the content domain of enabling skills and to serve as one of the bases for documenting the content validity of the assessment measures that will be developed from that domain. The evaluation of content validity is a judgmental process and is enhanced when multiple judges from relevant areas of expertise are represented in the process (Ghiselli, Campbell, & Zedeck, 1981). The procedures used in this study emphasized the involvement of large numbers of teachers and other relevant constituencies throughout the job analysis.

The job analysis methodology used in the present study consisted of two major phases. The first phase was designed to define the domain of important enabling skills. This was accomplished through the use of committees of content experts. The second phase was designed to: (1) obtain verification from large numbers of practicing professionals and school-related community groups that the committees of content experts had, indeed, defined a domain of important enabling skills, and (2) identify a core of important enabling skills relevant for all entry-level teachers. These objectives were accomplished through the use of a large-scale job analysis survey that was completed by teachers, principals, administrators, state department of education officials, and Parent Teacher Association officials. These two phases will be described in this paper.

Phase I: Definition of the Domain of Important Enabling Skills

An important step in the process of documenting content validity is defining the domain of interest (Guion, 1977). Typically, the content domain is defined by committees of subject-matter experts who use open discussion to arrive at a consensus definition of the domain (Schmitt & Ostroff, 1986; Schneider & Konz, 1989). In this study, the domain of important enabling skills was defined with the involvement of content experts who participated on an individual and committee basis. These two approaches facilitated the involvement of large numbers of content experts in a cost-effective and efficient manner. The specific steps in these approaches are described below.

Step 1. A draft description of the enabling skills domain was constructed by ETS Test Development staff. Consistent with typical job analytic procedures, several sources of information were reviewed in developing the first draft: relevant professional literature, existing examinations dealing with teaching skills (e.g., NTE Core Battery, Educational Testing Service, 1983), existing descriptions of the functions of teachers (see Rosenfeld, Thornton, & Skurnik, 1986), the enabling skills required by various states as part of their licensing requirements, and Test Development staffs' own expertise in the field of teaching and teacher assessment. The first draft of what was to be the job analysis survey consisted of 119 enabling skill statements clustered by ETS Test Development staff into five enabling skill dimensions: (1) Reading, (2) Writing, (3) Mathematics, (4) Listening, and (5) Speaking. Writing was subdivided into three sections: (1) editing and revising skills, (2) composing skills, and (3) integrated communication skills. It was decided at the outset by ETS management that characteristics such as dedication, motivation, perseverance, and related personality factors (although important to the teaching profession) would not be considered as part of the enabling skills domain for this examination because of the difficulty of reliably measuring these qualities. This draft instrument was developed as a starting point for defining the domain of enabling skills. It was designed to be used as a basis for stimulating discussion with relevant individuals and groups outside of ETS.

Step 2. The next step in this process involved the identification of an External Review Panel to aid in defining the domain of enabling skills (see Appendix A for list of members). Their task consisted of the review and critique of the first draft of the enabling skills domain. ETS staff members believed that a wide range of professional and community groups having an interest in teacher licensure should be involved in the domain definition stage of this project. As a result, ETS project staff contacted the following associations: National Education Association (NEA), American Federation of Teachers (AFT), National Association of Elementary School Principals (NAESP), National Association of Secondary School Principals (NASSP), American Association of Colleges for Teacher Education (AACTE), National Association of State Directors of Teacher Education and Certification (NASDTEC), and the National Parent Teacher Association (NPTA). In each instance, an ETS staff member described the project and asked if the association was interested in participating in the project by recommending several members of their association to review the first draft of the enabling skills domain. All associations agreed to participate. They were requested to recommend members who would be willing and able to review and critique the draft domain. In addition, they were asked that their members be selected from different regions of the country and have representation by gender and race/ethnicity. The NEA and AFT were each asked to provide one elementary, one middle, and one secondary school teacher. The NAESP and NASSP were each asked to provide one school principal. NASDTEC, AACTE, and the NPTA each provided the names of five members of their associations. In total, 27 individuals were recommended. ETS staff contacted each of the 27 individuals by telephone to confirm their participation.

The 27 panel members were sent a copy of the draft of the enabling skills domain along with a letter describing the project and requesting that they review and critique the draft, and a postage-paid return envelope for them to return the draft with their written comments. They were asked to review its overall structure (i.e., the dimensionality of the domain) and each individual enabling skill statement for its clarity and its relevance to all teachers. The reviewers were also instructed to delete any skill they believed was not an important part of the domain and to add any enabling skills they believed were excluded. An ETS staff member called each of the reviewers approximately one week after the draft was sent to schedule and then conduct a telephone interview to discuss their comments.

The first draft was revised based on comments made by 21 of the 27 External Review Panel members (despite repeated attempts, six members could not be contacted). In general, the overall dimensionality of the domain remained the same: no additional dimensions were added to the original five, and none of the existing dimensions were deleted. The dimension of Reading was subdivided into five sections. These subsections grouped the existing enabling skills into related content clusters. This clustering facilitated the interpretation of the Reading dimension. The five subsections were: (1) understanding the argument of a reading selection, (2) understanding the implied content of a reading selection, (3) understanding the organization of a reading selection, (4) understanding the way in which language is used in a reading selection, and (5) understanding other features of a reading selection.

Approximately 15 additional skills were included within the dimension of Speaking. These skills dealt primarily with the dynamic nature of speaking (e.g., adjust to an unexpected change in the communicative situation; exercise good judgment with respect to turn-taking). Eight of these 15 skills were subsumed under a new subsection of Speaking dealing with

interactive communication skills. The resulting second draft consisted of 139 enabling skill statements.

Step 3. The second draft of enabling skills was reviewed by a 12 person National Advisory Committee drawn from members of the same constituencies described in Step 2. ETS staff members contacted the associations and asked them to recommend additional members of their organizations who they believed would be useful in defining enabling skills, who would openly share their views, and who would interact well in a group. The NEA and AFT each provided three teachers (one elementary, one middle, one secondary). The NAESP and NASSP each provided one school principal. NASDTEC and the NPTA each provided one member; the AACTE provided two deans of colleges of education. The Committee had representation by gender, race/ethnicity, and geographic region (see Appendix B for list of members). The members of the National Advisory Committee convened for a two-day meeting at Educational Testing Service in Princeton, New Jersey[1]. The goal of the Committee was to review the second draft of the enabling skills domain and to ensure that it accurately represented what they considered to be a domain of important enabling skills.

Committee members were sent a copy of the second draft in the mail two weeks before the meeting was to be held. They were told about the purpose of the meeting, asked to review the draft, and to come prepared to discuss it with the other members of the Committee.

The meeting was led by ETS Test Development and Research staff. During the meeting, each enabling skill statement was reviewed, and modifications were made based upon the consensus judgment of the Committee. First, based upon the recommendations of the Committee, 4 of the 10 enabling skills from the existing subsection of Reading entitled understanding the organization of a reading selection were moved to form an additional subsection entitled understanding the content of the reading selection. Second, two new dimensions were added to the domain description: Interactive Communication Skills and Technology. Interactive Communication Skills was formed by combining existing enabling skills from the subsection of Writing covering integrated communication with skills from the dimension of Speaking, including the subsection dealing with interactive communication. Technology consisted of 23 new enabling skills primarily focusing on an understanding of computers and computer software. There was some disagreement among the committee members concerning the desirability of including this dimension, but it was decided by the Committee that it tentatively be included, subject to possible deletion after the committee members had an opportunity to review the revised domain following the meeting. The Committee also agreed that obtaining views on this matter from an independent group of teachers (upon whom the job analysis survey eventually would be pilot tested) would be helpful in making the final decision about whether or not to include this dimension in the domain of enabling skills.

One week after the meeting, the revised description was mailed to the members of the National Advisory Committee for their final approval. A telephone interview was conducted

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*[1] Two members of the National Advisory Committee, one dean and the PTA official, were not able to be present at the meeting. Their comments were obtained via a telephone interview.*

with each member to determine if any further revisions were necessary. No revisions, other than some minor wording changes, were suggested. Several members re-emphasized their doubt as to whether Technology should remain as part of the content domain. Although, they still believed it was an important area of understanding, they were less certain that it should be considered part of an enabling skill domain that included dimensions such as Reading, Writing, and Mathematics. It was decided by the Committee and ETS staff that if the teachers in the pilot test (the results of which will be presented in the following sections) confirmed the uncertainty expressed by several of the committee members, Technology would be deleted from the enabling skills domain.

Phase II: Identification of the Core of Important Enabling Skills for Entry-Level Teachers

Survey methodology was used to verify the judgments of the committees of content experts and identify the core of important enabling skills from within the defined content domain. A survey approach greatly facilitates obtaining the input of large numbers of practicing professionals in a timely and cost-effective manner. The involvement of large numbers of practicing professionals also permits analyses to be conducted concerning the extent to which various subgroups of practicing professionals agree on the importance of the enabling skills described in the job analysis survey (e.g., comparisons between teachers from urban, suburban, and rural school settings; male and female teachers). The use of survey techniques in job analysis is well documented (see Geisinger, 1987; Silvestro, Clayton, & Glenn, 1989; Smith, Hambleton, & Rosen, 1988).

Importance Rating Scale. In accordance with established professional standards (see Principles for the Validation and Use of Personnel Selection Procedures, 1987; Standards for Educational and Psychological Testing, 1985), an importance scale was used in the survey to evaluate the enabling skills of the content domain. The scale is presented below. Comparable 5-point-anchor descriptors have been used in other job analytic studies (see Schneider & Konz, 1989; Silvestro, Clayton, & Glenn, 1989). This scale was reviewed and approved by the National Advisory Committee.

> Regardless of the subject-matter area or grade they teach, how important is it that all entry-level teachers be able to do the following?
>
> (1) Of no importance
> (2) Of little importance
> (3) Moderately important
> (4) Very important
> (5) Extremely important

Pilot Test. Prior to the large scale administration of the job analysis survey, it was pilot tested on six experienced teachers (two elementary, two middle, and two secondary) in the New Jersey and Pennsylvania areas (see Appendix C). The pilot test was conducted to determine if the content of the survey was clear and understandable and if the survey instructions and format needed to be modified. A copy of the survey was mailed to the teachers, and their comments were obtained via a telephone interview conducted by an ETS staff member. Although the entire survey was reviewed during the interviews, particular attention was directed towards the Technology dimension and whether it was considered to be an enabling skill. The consensus of

these teachers was that it was not an enabling skill and should be deleted. Like several members of the National Advisory Committee, they believed it was important, but not part of the enabling skills domain. Based upon this feedback, Technology was deleted from the description. The teachers did not have any difficulty understanding or completing the survey. On average, the teachers required 45 minutes to complete the survey.

Final Survey Format. The final version of the survey (included in Appendix D) consisted of three parts. In order to encourage participants to respond candidly, no personal identifiers (e.g., name, social security number) were required of the respondents. Part I included the enabling skills that were to be rated using the importance scale described earlier. This section consisted of 134 enabling skill statements clustered within six dimensions: (1) Reading, (2) Writing, (3) Mathematics, (4) Listening, (5) Speaking, and (6) Interactive Communication Skills. Also included in Part I was a section that provided respondents with the opportunity to add additional dimensions and specific enabling skills they believed should have been included in the survey and a section that asked respondents to indicate how well the enabling skills within each of the six dimensions were covered in the survey. Part II was designed to obtain respondent judgments as to how much emphasis they believed the examination should place on each of the six enabling skill dimensions. Part III was comprised of demographic descriptors that were used to characterize the survey respondents and, where appropriate, to conduct subgroup analyses (i.e., do the different demographic groups of respondents agree in their ratings of enabling skill importance)[2].

## Survey Participants

Three separate groups were involved in the survey phase of this study. The first group consisted of state-level representatives from 10 constituencies involved in teaching, teacher education, licensure and certification, and school-related community organizations. The second, was a group of teachers drawn from each of the 50 states and the District of Columbia, and the third was a group of minority teachers provided by the NEA. Each of these groups and their rationale for inclusion are provided below.

Constituencies. Professional and community organizations were included in the survey because they represent relevant decision- and policy-makers with respect to teacher education and licensure and certification. The 10 constituencies involved in this phase of the study and the number of participants from each one is provided in Table 1. Surveys were administered to 630 state-level representatives across the 10 constituencies. Their names and addresses were provided by the director or executive director of each constituency.

Teachers. Since the purpose of this study is to define the domain of enabling skills judged to be important for all entry-level teachers regardless of school level or subject matter

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[2] *Two different demographic sections were used in this study: one for constituent respondents and one for both groups of teacher respondents. Both versions are included in Appendix D.*

taught, it seemed appropriate to involve large numbers of practicing teachers in the process used to identify these skills. The intent was to obtain judgments from a large national group of teachers, that gave each state and the District of Columbia equal weight in the sampling procedure. One hundred twenty teachers (40 elementary, 40 middle, and 40 secondary school teachers) from each state (and the District of Columbia) were asked to participate in this study. The names and addresses of the 6,120 teachers were obtained by random selection from the comprehensive lists of teachers in each state maintained by a well established marketing research firm, Market Data Retrieval (MDR). MDR claims coverage of over 90% of the public school teachers in the United States.

Minority Teachers. One of the important questions this study sought to answer was whether majority and minority teachers agree on the enabling skills judged to be important for entry-level teachers. Since MDR could not identify the race/ethnicity of the teachers within its database, project staff believed that it would be appropriate to identify a supplementary group of minority teachers. This would increase the likelihood that a sufficient number of minority teacher responses would be available for separate analyses. The NEA agreed to select a random sample of 250 Black and 250 Hispanic teachers from each school level from their membership files. In order to maintain the confidentiality of their members, NEA agreed to mail the 1,500 surveys to their members.

To distinguish between the two groups of teacher participants, the group of 6,120 teachers provided by the private survey organization will be referred to as the primary group of teachers. The group of 1,500 minority teachers provided by the NEA will be referred to as the supplementary group of teachers.

**Table 1**

**Number of Survey Participants from Each Constituency**

| Constituency | N |
|---|---|
| National Association of State Directors of Teacher Education and Certification (NASDTEC) | 50 |
| American Association of Colleges for Teacher Education (AACTE) | 74 |
| National Association of Elementary School Principals (NAESP) | 50 |
| National Association of Secondary School Principals (NASSP) | 48 |
| American Association of School Administrators (AASA) | 48 |
| National Parent Teacher Association (NPTA) | 110 |
| National Association of State Boards of Education (NASBE) | 50 |
| National School Board Association (NSBA) | 100 |
| American Federation of Teachers (AFT) | 50 |
| National Education Association (NEA) | 50 |
| Total | 630 |



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Survey Administration

Administration of the surveys occurred during the months of May 1989 through January 1990. Accompanying each survey was a postage-paid return envelope (addressed to ETS) and a letter of invitation to participate. The letter briefly explained the purpose of the study and the importance of participation. Nine of the 10 constituencies provided a letter on their stationary with the signature of either the executive director or president encouraging their members to complete the survey and return it to ETS. One of the constituencies was in the process of changing presidents and did not believe it was appropriate to have the letter come directly from its executive office. They preferred to have the letter come directly from ETS. All surveys to the constituent group were mailed by ETS.

The letter sent to the primary group of 6,120 teachers came from ETS with the signature of Gregory A. Anrig, president of ETS. The survey and the letter sent to the supplementary group of 1,500 teachers came directly from the NEA with the signature of the president of the association. The letters from the different groups were adaptations of a letter originally designed by ETS, and therefore the content of each was highly similar. A minor exception to this was that the letter sent to the 6,120 teachers also included an offer of a personalized letter of acknowledgement of participation for those who returned surveys. Three sample letters of invitation, one from each of the three major groups of participants, i.e., constituencies, primary teachers, and supplementary minority teachers, are included in Appendix E. One week following the administration of the surveys, a follow-up postcard was mailed to the participants reminding them to complete and return the surveys.

Data Analysis

The purpose of the data analysis was to identify a core of enabling skills that was judged to be important by the constituent groups as well as by both groups of teachers participating in the large-scale surveys. The results of the survey were to be used to develop examination specifications that included enabling skills of greater importance and excluded enabling skills of lesser importance.

Three primary analyses were conducted: (1) frequency distributions of importance ratings, (2) means of importance ratings, and (3) correlations of mean importance ratings. Each analysis contributes a significant piece of information, that when evaluated in total, provides substantial information that can be used to identify a core of important enabling skills for entry-level teachers.

Frequency distributions across the response categories for each enabling skill were computed. This analysis makes it possible to identify the percent of respondents who judged each enabling skill to be of little importance or of no importance (a scale value of 1 or 2) and very important or extremely important (a scale value of 4 or 5). A mean importance value for each enabling skill was also computed. Means were computed for the total group of constituent respondents and both groups of teacher respondents as well as for relevant subgroups of teacher respondents (e.g., elementary, middle, secondary; Black, Hispanic, White). The subgroup comparisons are critical for identifying enabling skills that are important for all relevant subgroups of entry-level teachers. The mean ratings may then be used to identify the most important enabling skills for inclusion in the Stage I assessment measures. In addition, to

determine the reliability of the mean importance ratings, two estimates of interrater reliability were computed: (1) group split half correlations and (2) intraclass correlations. Lastly, a Pearson product-moment correlation of the mean importance ratings for various subgroups of teacher respondents was computed. Specifically, the profile of 134 enabling skill means for one subgroup (e.g., females) was correlated with the profile of 134 enabling skill means for another subgroup (e.g., males). This analysis is used to determine the similarity in the patterns of the mean ratings for the subgroups. High correlations are indicative of congruent perceptions with respect to the relative importance of the enabling skills (Branch, 1990).

Eligibility Standards. Given the importance of the test that will ultimately be developed using the results of this job analysis, ETS project staff thought it would be desirable to set standards for use in deciding which enabling skills would be eligible for consideration in designing test specifications. While the job analysis literature does not specify what standards should be set, or even whether they need to be set, ETS project staff believed that, at the very least, a majority of the respondents should judge a skill as being at least moderately important for it to be considered eligible for consideration in the examination specifications. Therefore, the following two standards were established: (1) fewer than 20% of the respondents judged an enabling skill to be of little importance (scale value of 2) or of no importance (scale value of 1), and (2) its mean importance value was at least 3.50 (the midpoint between moderately important and very important). It is believed that these criteria (consistent with the intent of content validity) substantially decrease the probability of including any unimportant enabling skills in the Stage I assessment measures. ETS believes that these standards may be considered to be conservative, and that content not meeting these standards could reasonably be considered for examination specifications in a licensing context. (It should be noted that these standards serve primarily as minimum levels and that the Test Development Committee is strongly encouraged to select for inclusion those enabling skills with the highest mean ratings, i.e., to go as far above the 3.50 standard as possible, while still maintaining sufficient breadth of content coverage.)

Interpretation of Mean Analysis and Eligibility Standard. The objective of this study is to identify a subset of enabling skills that is important for all entry-level teachers. This places emphasis on the analysis of means by relevant subgroups of teachers and the total group of constituents. The determining factor is whether or not an enabling skill at least meets the mean eligibility standard of 3.50 for each of the relevant subgroups of teacher respondents and for the total group of constituent respondents. An enabling skill that receives a mean rating of less than 3.50 by any relevant subgroup of teachers or the constituent respondents is not considered eligible for inclusion in the Stage I assessments. An enabling skill that receives a mean rating of 3.50 or greater by all the relevant subgroups of teachers and the constituent respondents is considered eligible for inclusion. Therefore, for the purpose of this study, it is not necessary to evaluate level differences by subgroup for enabling skills within the "exclusion" and "inclusion" clusters.

## Results

The results first will be presented for each of the three respondent groups separately; this will be followed by a comparison across the respondent groups.

Section 1: Constituent Respondents

The constituencies that were selected represent a wide range of decision-makers with respect to teacher licensure and certification. Since the intent was not to focus upon the responses of any one constituency, but on the collective responses of this group of decision-makers, the results of the survey administration are presented in aggregate.

Description of Survey Respondents. Of the 630 surveys, 289 were returned (46% response rate). Eleven percent of the respondents were from NASDTEC; 16% were from AACTE; and 14% were from NPTA. Twenty-six percent were from the three administrator associations: NAESP, NASSP, and AASA. Twenty percent were from the two school board associations: NASBE and NSBA; and 14% were from the two teacher unions: AFT and NEA. Fifty-eight percent of the respondents were male and 42% were female. Eighty percent were over the age of 43 years; and 90% of the respondents were White.

Frequency Distributions Across Response Categories. For each of the 134 enabling skills the percent of respondents who judged it to be of little importance or of no importance and very important or extremely important was computed (see Appendix F). Only one enabling skill was judged to be of little importance or of no importance by more than 20% of the respondents: #75 (use examples from the history of mathematics). This skill was judged to be of little importance or of no importance by 98 (34%) respondents. Therefore, according to the 20% standard, 133 enabling skills (99% of the content domain) may be considered to be eligible for inclusion as part of the Stage 1 assessment measures. In addition, it is worth noting that 98% of the enabling skills were judged to be very important or extremely important by 50% or more of the respondents.

Mean Ratings of Enabling Skill Importance. The mean importance value for each enabling skill was computed to identify the most important skills from within the larger content domain (see Appendix F). Approximately 80% (n = 107) of the enabling skills had a mean importance rating of 4.00 (very important) or higher. The mean ratings ranged from a low of 2.90 for enabling skill #75 (use examples from the history of mathematics) to a high of 4.85 for #1 (determine main ideas). Only two enabling skills received a mean rating of less than 3.50 (the midpoint between moderately and very important). These skills were within the dimension of Mathematics: #63 (recognize relationships of variables, $\underline{M} = 3.47$) and #75 ($\underline{M} = 2.90$). Enabling skill #75 was also "flagged" by the frequency analysis. Since these two skills did not meet the 3.50 standard, they are not eligible for inclusion in the assessment measures (unless the Test Development Committee provides strong rationale to the contrary). More than 98% of the content domain (n = 132) is eligible for consideration in the development of examination specifications based on the results obtained from this group of respondents. These findings provide substantial confirmation of the judgment of the Advisory Committee members who were asked to identify a domain of enabling skills important for all entry-level teachers.

Reliability of Importance Ratings. In order to determine the reliability of the importance ratings provided by the group of constituent respondents, two interrater reliability measures were computed: (1) group split half correlations (Cornelius, 1988) and (2) intraclass correlations (Lahey, Downey, & Saal, 1983). In the group split half measure, the total group of constituent respondents was randomly divided into two halves, and the mean importance rating for each of the 134 enabling skills was computed. The profile of 134 enabling skill means for

one half then was correlated with the profile of 134 enabling skill means for the other half. The split half reliability estimate was .98. The intraclass correlation was computed using analysis of variance procedures that treated respondents as a random effect (see Shrout & Fleiss, 1979; Formulas ICC(2,1) and ICC (2,K)). Treatment of the respondents as a random effect, permits the generalization of the results to other groups of similarly selected constituent respondents. The intraclass correlation reliability estimate also was .98. The magnitude of these estimates indicates that the importance ratings provided by the constituent respondents are highly reliable. This indicates that highly similar distributions of ratings would likely be obtained if the survey were administered to other groups drawn from the same constituencies in the same manner.

Summary of Results for Constituent Respondents

The results of the frequency analysis indicated that one enabling skill within the dimension of Mathematics was judged to be of little importance or of no importance by more than 20% of the respondents. Thirty-four percent of the respondents judged enabling skill #75 (use examples from the history of mathematics) to be of little or no importance. The mean analysis revealed two enabling skills, both within the dimension of Mathematics, that had a mean importance rating of less than 3.50: #63 (recognize relationships among variables) and #75. More than 98% of the enabling skills content domain met or exceeded the eligibility standards set for consideration in the development of examination specifications. The results of the reliability analyses indicated that the mean importance ratings were highly reliable; such that similar distributions of mean importance ratings would very likely be provided by another group drawn from the same constituencies in the same manner. These results verify the judgments of the committees of subject-matter experts who were asked to construct a domain of important enabling skills.

Section 2: Teacher Respondents: Primary Group

The results for the primary group of teacher respondents first will be presented at the aggregate level. Then the results will be presented for relevant subgroups of teachers. Enabling skills that are judged to be important (a mean rating of 3.50 or higher) by all the relevant subgroups of teachers will be considered to be part of the core of important enabling skills.

Total Group of Respondents

Description of Survey Respondents. Of the 6,120 surveys, 2,269 were returned (37% response rate). Twenty-eight percent of the respondents were from an urban school setting; 35% were from a suburban setting; and 37% were from a rural setting. Seventy-three percent were between the ages of 35 and 54 years. Seventy-eight percent had 11 or more years of teaching experience. Sixty-five percent were female and 35% were male. Ninety percent were White (non-Hispanic); 6% were Black; and 2% were Hispanic. Thirty percent of the respondents were elementary school teachers; 30% were middle school teachers; and 41% were secondary school teachers. The number of respondents, by state, ranged from a low of 29 from California to a high of 62 from Indiana. These demographic distributions are highly similar to those reported in a national study conducted by the National Center for Education Information (NCEI) (Feistritzer, 1986). A comparison of these distributions for variables common to both studies is presented in Table 2. The high degree of similarity may be used as an indicator of the representativeness of the primary group of teachers who participated in the present study. A

complete description of the demographic characteristics of the primary group of teacher respondents is provided in Appendix G.

Frequency Distributions Across Response Categories. The percent of respondents who judged each enabling skill to be of little importance or of no importance and very important or extremely important is presented in Appendix H. Of the 134 enabling skills, 3 were judged to be of little importance or of no importance by more than 20% of the respondents. These three skills were within the dimension of Mathematics: #61 (interpret range, variance, standard deviation, 21%); #63 (recognize relationships among variables, 25%); and #75 (use examples from the history of mathematics, 42%). The other 131 enabling skills (98% of the content domain) met the frequency standard to be considered eligible for inclusion in the Stage I assessments. In addition, 94% of the enabling skills were judged to be either very important or extremely important by 50% or more of the respondents.

**Table 2**

**Comparison of Demographic Distributions: Primary Teacher Respondents and NCEI**

| Demographic Characteristic | Teacher | NCEI % |
|---|---|---|
| **Sex** | | |
| Male | 35 | 31 |
| Female | 65 | 69 |
| **Race/Ethnicity** | | |
| White | 90 | 91 |
| Black | 6 | 6 |
| Hispanic | 2 | 2 |
| **Age (years)** | | |
| < 25 | 1 | 2 |
| 25 - 34 | 15 | 23 |
| 35 - 44 | 43 | 41 |
| 45 - 54 | 31 | 23 |
| 55 > | 11 | 11 |
| **Experience (years)** | | |
| < 5 | 8 | 8 |
| 6 - 10 | 14 | 16 |
| 11 - 15 | 21 | 24 |
| 16 - 20 | 24 | 22 |
| 21 > | 33 | 30 |

Mean Ratings of Enabling Skill Importance. The mean importance rating and standard deviation for each of the 134 enabling skills is presented in Appendix H. Sixty-six percent of the enabling skills had a mean importance rating of 4.00 (very important) or higher. The means

ranged from a low of 2.27 for enabling #75 (use examples from the history of mathematics) to a high of 4.77 for #1 (determine main ideas). Six enabling skills received a mean importance rating of less than 3.50. One skill was within the dimension of Reading: #14 (recognize style, M = 3.37). Four skills were within the dimension of Mathematics: #61 (interpret range, variance, standard deviation, M = 3.22); #63 (recognize relationships among variables, M = 3.20); #66 (recognize patterns, M = 3.36); and #75. One skill was within the dimension of Listening: #100 (understand spoken English dialects, M = 3.47). Enabling skills #61, #63, and #75 were also "flagged" by the frequency analysis. The failure of these six enabling skills to meet the 3.50 standard excludes them from the Stage I assessment measures (contingent upon the recommendations of the Test Development Committee). More than 95% of the content domain (n=128) met or exceeded the mean rating standard of 3.50 and is eligible for consideration in the development of examination specifications based on the results obtained from this group of respondents. These findings verify the judgments of the Advisory Committee members. The large-scale survey of teachers confirms that the vast majority of enabling skills identified as being important for entry-level teachers by the Committee was also judged important by a large number of practicing teachers from across the country.

Reliability of Importance Ratings. Group split half and intraclass correlations were computed to determine the reliability of the importance ratings provided by the primary group of teacher respondents. The group split half reliability estimate was .99; and the intraclass correlation reliability also was .99, indicating an extremely high level of reliability. This indicates that another group of teachers selected in a similar manner would very likely provide ratings that were highly related to those obtained from this group of teachers.

Content Analysis of Respondents' Write-In Comments. As described previously, the job analysis survey included a section that provided respondents with an opportunity to list any additional dimensions and enabling skills that they believed should be included in the domain. A random sample of approximately 300 surveys were content analyzed. The most consistent trend was the mention of personal qualities associated with teaching, e.g., dedication, motivation. While these may very well be important facets of teacher competency, it was decided from the outset that such factors would not be addressed in the Stage I assessment.

## Responses by Relevant Subgroups

While the analyses at the total group level are useful, the critical issue is whether or not an enabling skill meets or exceeds the 3.50 eligibility standard for all relevant subgroups of teachers. Therefore, separate analyses were conducted to determine how relevant subgroups of teachers judged the enabling skills. Since preliminary findings indicated that the mean analysis was a more conservative measure than the frequency analysis (i.e., identified for possible exclusion a greater number of enabling skills), response frequencies were not computed at the subgroup level.

## Responses by Race/Ethnicity

Mean Ratings of Enabling Skill Importance. Mean importance ratings were computed for Black, White, and Hispanic respondents. (Insufficient number of respondents precluded the inclusion of other races/ethnicities in the analysis). The mean importance ratings for these three subgroups are presented in Appendix I. The means for the Black respondents ranged

from a low of 3.19 for skill #75 (use examples from the history of mathematics) to a high of 4.75 for skill #56 (perform computations). The means for the White respondents ranged from a low of 2.67 for skill #75 to a high of 4.78 for skill #1 (determine main idea). The means for Hispanic respondents ranged from a low of 3.12 for skill #75 to a high of 4.79 for skills #19 (use table of contents) and #44 (recognize basic grammatical errors). Seven enabling skills received mean importance ratings of less than 3.50 by one or more of the three subgroups. These seven skills and their means are presented in Table 3. The exclusion of these seven enabling skills still leaves 95% of the content domain (n = 127) eligible for inclusion in the assessment measures.

**Table 3**

**Mean Importance Ratings by Race/Ethnicity for the Seven Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | BLACK | WHITE | HISPANIC |
|---|---|---|---|
| **READING** | | | |
| 14. Recognize style | | 3.35 | 3.48 |
| **MATHEMATICS** | | | |
| 61. Interpret range, variance, S.D. | 3.47 | 3.19 | 3.44 |
| 63. Recognize relationships among variables | 3.46 | 3.17 | 3.48 |
| 65. Write equations using variables | | 3.48 | |
| 66. Recognize patterns | | 3.33 | |
| 75. Use examples from history of mathematics | 3.19 | 2.67 | 3.12 |
| **LISTENING** | | | |
| 100. Understand spoken English dialects | | 3.43 | |

Agreement in Relative Importance Among Races/Ethnicities. In order to determine the extent of agreement among the subgroups as to the relative importance of the enabling skills, Pearson product-moment correlations were computed. The profile of 134 mean importance ratings for each subgroup was correlated. These values are presented in Table 4. All the values exceeded .90, indicating a very high level of agreement among the subgroups.

**Table 4**

**Intercorrelation Matrix of Mean Ratings of Enabling Skill Importance**

| | Black | White | Hispanic |
|---|---|---|---|
| | | .96 | .93 |
| Black | | | |
| White | | | .91 |
| Hispanic | | | |

Responses by Sex

Mean Ratings of Enabling Skill Importance. Mean importance ratings were computed for female and male respondents. The mean importance ratings and standard deviations are presented in Appendix J. The means for females ranged from a low of 2.73 for skill #75 (use examples from the history of mathematics) to a high of 4.80 for skill #1 (determine main idea). The means for males ranged from a low of 2.69 for skill #75 to a high of 4.72 for skill #1. Nine enabling skills received mean importance ratings of less than 3.50 by at least one of the two subgroups. These nine skills and their means are presented in Table 5. The exclusion of these nine enabling skills leaves 93% of the content domain (n = 125) eligible for inclusion in the assessment measures.

**Table 5**

**Mean Importance Ratings by Sex for the Nine Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | FEMALE | MALE |
|---|---|---|
| **READING** | | |
| 14. Recognize style | 3.47 | 3.18 |
| **MATHEMATICS** | | |
| 60. Interpret mean, median, mode | | 3.49 |
| 61. Interpret range, variance, S.D. | 3.27 | 3.13 |
| 63. Recognize relationships among variables | 3.15 | 3.27 |
| 66. Recognize patterns | 3.38 | 3.30 |
| 74. Demonstrate fundamental algorithms | | 3.47 |
| 75. Use examples from history of mathematics | 2.73 | 2.69 |
| 78. Use a variety of materials | | 3.48 |
| **LISTENING** | | |
| 100. Understand spoken English dialects | | 3.29 |

Agreement in Relative Importance Between Sexes. In order to determine the extent of agreement between females and males as to the relative importance of the enabling skills, Pearson product-moment correlations were computed. The profile of 134 mean importance ratings for the two subgroups was correlated. The obtained correlation was .97, indicating a very high level of agreement in their distributions of mean importance ratings.

Responses by Teaching Experience

Mean Ratings of Enabling Skill Importance. Mean importance ratings were computed for respondents with 5 or less years of teaching experience, 6 to 10 years, 11 to 15 years, 16 to 20 years, and 21 or more years. The mean importance ratings and standard deviations are presented in Appendix K. The means for respondents with 5 or less years of teaching experience ranged from a low of 2.75 for skill # 75 (use examples from the history of



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mathematics) to a high of 4.76 for skill #111 (recognize when a message has not been understood). The means for respondents with 6 to 10 years of experience ranged from a low of 2.71 for skill #75 to a high of 4.79 for skill #1 (determine main idea). The means for respondents with 11 to 15 years of experience ranged from a low of 2.64 for skill #75 to a high of 4.76 for skill #1. The means for respondents with 16 to 20 years of experience ranged from a low of 2.69 for skill #75 to a high of 4.80 for skill #1. The means for respondents with 21 or more years of experience ranged from a low of 2.78 for skill #75 to a high of 4.76 for skill #1. Seven enabling skills received mean importance ratings of less than 3.50 by one or more of these respondent subgroups. These seven skills and their means are presented in Table 6. The exclusion of these seven enabling skills leaves 95% of the content domain (n = 127) eligible for inclusion in the assessment measures.

**Table 6**

**Mean Importance Ratings by Teaching Experience for the Seven Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | ≤ 5 yrs | 6-10 yrs | 11-15 yrs | 16-20 yrs | ≥ 21 yrs |
|---|---|---|---|---|---|
| **READING** | | | | | |
| 14. Recognize style | 3.46 | 3.31 | 3.39 | 3.39 | 3.34 |
| **MATHEMATICS** | | | | | |
| 61. Interpret range, variance, S.D. | 3.38 | 3.12 | 3.22 | 3.21 | 3.22 |
| 63. Recognize relationships among variables | 3.30 | 3.15 | 3.11 | 3.21 | 3.23 |
| 65. Write equations using variables | | | | | 3.44 |
| 66. Recognize patterns | 3.46 | 3.36 | 3.29 | 3.36 | 3.36 |
| 75. Use examples from history of math | 2.75 | 2.71 | 2.64 | 2.69 | 2.78 |
| **LISTENING** | | | | | |
| 100. Understand spoken English dialects | | | | 3.38 | 3.44 |

Agreement in Relative Importance Among Levels of Teaching Experience. The profiles of 134 mean importance ratings for each subgroup were correlated. These values are presented in Table 7. All values exceeded .95, indicating that the distributions of mean ratings among the different levels of teaching experience are highly similar.

**Table 7**

**Intercorrelation Matrix of Mean Ratings of Enabling Skill Importance**

| | ≤ 5 yrs | 6 - 10 yrs | 11 - 15 yrs | 16 - 20 yrs | ≥ 21 yrs |
|---|---|---|---|---|---|
| ≤ 5 yrs | | .98 | .98 | .97 | .97 |
| 6 - 10 yrs | | | .99 | .99 | .98 |
| 11 - 15 yrs | | | | .99 | .99 |
| 16 - 20 yrs | | | | | .99 |
| ≥ 21 yrs | | | | | |

Responses by Subject Taught

Mean Ratings of Enabling Skill Importance. Means were computed by those subjects that had sufficient numbers of respondents. Mean importance ratings were computed for respondents who taught business and vocational education (B & V Ed.), social sciences (Soc. Sci.), physical and biological sciences (P & B Sci.), mathematics and computer science (M & C Sci.), language arts (Lan. Arts), and special education (Special Ed.). The mean ratings and standard deviations for these subgroups are presented in Appendix L. The means for respondents who taught business and vocational education ranged from a low of 2.61 for enabling skill #75 (use examples from the history of mathematics) to a high of 4.74 for skill #19 (use table of contents). The means for respondents who taught social sciences ranged from a low of 2.79 for skill #75 to a high of 4.80 for skill #1 (determine main idea). The means for respondents who taught physical and biological sciences ranged from a low of 2.81 for skill #75 to a high of 4.78 for skill #1. The means for respondents who taught mathematics and computer science ranged from a low of 2.65 for skill #75 to a high of 4.70 for skill #1. The means for respondents who taught language arts ranged from a low of 2.67 for skill #75 to a high of 4.84 for skill #1. The means for respondents who taught special education ranged from a low of 2.64 for skill #75 to a high of 4.79 for skill #1. Twenty-one enabling skills received mean importance ratings of less than 3.50 by one or more of the subgroups. These 21 skills and their means are presented in Table 8 (see page 18). The exclusion of these 21 enabling skills leaves 84% of the content domain (n = 113) eligible for inclusion in the Stage I assessments.

Agreement in Relative Importance Among Subjects Taught. The correlations among the profiles of 134 means across the different subjects taught are presented in Table 9. All the correlations either met or exceed a value of .85. This indicates that the distribution of means across the different subjects taught are highly similar.

**Table 9**

**Intercorrelation Matrix of Mean Ratings of Enabling Skill Importance**

| | B & V Ed. | Soc. Sci. | P & B Sci. | M & C Sci. | Lan. Arts | Special Ed. |
|---|---|---|---|---|---|---|
| B & V Ed. | | .93 | .94 | .94 | .92 | .94 |
| Soc. Sci. | | | .90 | .85 | .98 | .92 |
| P & B Sci. | | | | .97 | .88 | .90 |
| M & C Sci. | | | | | .85 | .90 |
| Lan. Arts | | | | | | .94 |
| Special Ed. | | | | | | |

Responses by School Setting

Mean Ratings of Enabling Skill Importance. Mean importance ratings were computed for respondents from urban, suburban, and rural school settings. The means and standard deviations for these subgroups are presented in Appendix M. The means for respondents from an urban school setting ranged from a low of 2.83 for skill #75 (use example from the history of mathematics) to a high of 4.76 for skill #1 (determine main idea). The means for respondents

Table 8

**Mean Importance Ratings by Subject Taught for the 21 Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | B & V ED. | SOCIAL SCIENCES | P & B SCIENCES | M & C SCIENCES | LANG. ARTS | SPECIAL ED. |
|---|---|---|---|---|---|---|
| READING | | | | | | |
| 8. Recognize persuasive techniques | 3.38 | | | | | |
| 14. Recognize style | 2.97 | 3.43 | 3.27 | 3.11 | | 3.32 |
| 16. Recognize ideas/situations | 3.44 | | | | | |
| 17. Determine author's purpose | 3.33 | | | 3.44 | | |
| 25. Identify what author assumes | 3.49 | | | | | |
| MATHEMATICS | | | | | | |
| 60. Interpret mean, median, mode | 3.39 | 3.49 | | | | |
| 61. Interpret range, variance, S.D. | 3.11 | 3.18 | 3.28 | 3.15 | 3.21 | 3.18 |
| 63. Recognize relationships among variables | 3.10 | 3.05 | | | 3.03 | 3.01 |
| 65. Write equations using variables | 3.28 | 3.29 | | | 3.28 | 3.40 |
| 66. Recognize patterns | 3.09 | 3.14 | | 3.48 | 3.20 | 3.24 |
| 67. Use formulas for determining length | 3.34 | 3.26 | | | 3.27 | 3.47 |
| 68. Use various systems of measurement | 3.46 | | | | | |
| 69. Convert units among measurement systems | | | | 3.32 | | 3.48 |
| 70. Interpret logical connectives | 3.34 | | | | | |
| 71. Use deductive/inductive reasoning | 3.41 | | | | | |
| 72. Draw correct conclusions | 3.33 | | | | | 3.45 |
| 74. Demonstrate fundamental algorithms | 3.45 | 3.30 | | | 3.41 | |
| 75. Use examples from history of math | 2.61 | 2.79 | 2.81 | 2.65 | 2.67 | 2.64 |
| 78. Use a variety of materials | 3.20 | 3.28 | | | 3.42 | |
| LISTENING | | | | | | |
| 79. Recall actual wording of message | | | | 3.38 | | |
| 100. Understand spoken English dialects | 3.35 | 3.42 | 3.28 | 3.38 | | |

from a suburban school setting ranged from a low of 2.60 for skill #75 to a high of 4.80 for skill #1. The means for respondents from a rural school setting ranged from a low of 2.73 for skill #75 to a high of 4.65 for skill #56 (perform computations). Nine enabling skills received mean importance ratings of less than 3.50 by one or more of the subgroups. These nine skills and their means are presented in Table 10 (see page 19). The exclusion of these nine skills leaves 93% of the content domain (n = 125) eligible for inclusion in the assessment measures.

**Table 10**

**Mean Importance Ratings by School Setting for the Nine Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | URBAN | SUBURBAN | RURAL |
|---|---|---|---|
| **READING** | | | |
| 14. Recognize style | 3.42 | 3.37 | 3.31 |
| **MATHEMATICS** | | | |
| 60. Interpret mean, median, mode | | | 3.49 |
| 61. Interpret range, variance, S.D. | 3.28 | 3.19 | 3.19 |
| 63. Recognize relationships among variables | 3.23 | 3.16 | 3.20 |
| 65. Write equations using variables | | | 3.48 |
| 66. Recognize patterns | 3.38 | 3.37 | 3.32 |
| 67. Use formulas for determining length | | 3.48 | |
| 75. Use examples from history of mathematics | 2.83 | 2.60 | 2.73 |
| **LISTENING** | | | |
| 100. Understand spoken English dialects | | 3.40 | 3.44 |

Agreement in Relative Importance Among School Settings. The profile of 134 mean importance ratings for each subgroup was correlated. These values are presented in Table 11. All the values were .99, indicating that the distributions of ratings among the respondents from the different school settings are extremely similar.

**Table 11**

**Intercorrelation Matrix of Mean Ratings of Enabling Skill Importance**

| | Urban | Suburban | Rural |
|---|---|---|---|
| Urban | | .99 | .99 |
| Suburban | | | .99 |
| Rural | | | |

Responses by School Level

Mean Ratings of Enabling Skill Importance. Mean importance ratings were computed for respondents from elementary, middle, and secondary school levels. The means and standard

deviations are presented in Appendix N. The means for respondents from elementary schools ranged from a low of 2.80 for skill #75 (use examples from the history of mathematics) to a high of 4.78 for skill #44 (recognize basic grammatical errors). The means for respondents from middle schools ranged from a low of 2.76 for skill #75 to a high of 4.69 for skill #104 (speak loudly enough to be heard). The means for respondents from secondary schools ranged from a low of 2.63 for skill #75 to a high of 4.66 for skill #104. Ten enabling skills received mean importance ratings of less than 3.50. These 10 skills and their means are presented in Table 12. The exclusion of these 10 enabling skills leaves 93% of the content domain (n = 124) eligible for inclusion in the assessment measures.

**Table 12**

**Mean Importance Ratings by School Level for the 10 Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | ELEMENTARY | MIDDLE | SECONDARY |
|---|---|---|---|
| **READING** | | | |
| 14. Recognize style | | 3.39 | 3.25 |
| **MATHEMATICS** | | | |
| 61. Interpret range, variance, S.D. | 3.26 | 3.22 | 3.19 |
| 63. Recognize relationships among variables | 3.10 | 3.21 | 3.26 |
| 65. Write equations using variables | | | 3.42 |
| 66. Recognize patterns | | 3.31 | 3.27 |
| 67. Use formulas for determining length | | | 3.41 |
| 74. Demonstrate fundamental algorithms | | | 3.42 |
| 75. Use examples from history of mathematics | 2.80 | 2.76 | 2.63 |
| 78. Use a variety of materials | | | 3.36 |
| **LISTENING** | | | |
| 100. Understand spoken English dialects | | | 3.39 |

Agreement in Relative Importance Among School Levels. The profile of 134 mean importance ratings for each subgroup was correlated. These values are presented in Table 13. All the values exceeded .90, indicating that the distributions of mean ratings of the respondents from the different school levels are highly similar.

**Table 13**

**Intercorrelation Matrix of Mean Ratings of Enabling Skill Importance**

| | Elementary | Middle | Secondary |
|---|---|---|---|
| Elementary | | .97 | .92 |
| Middle | | | .99 |
| Secondary | | | |

Responses by Geographic Region

Mean Ratings of Enabling Skill Importance. Mean importance ratings were computed for respondents from four geographic regions: Far West, Southern, Central, and Northeast. These regional breakdowns are consistent with those recommended by the National Association of State Directors of Teacher Education and Certification (NASDTEC). A list of the states within each of the four regions is presented in Appendix O. The means and standard deviations for these regions are presented in Appendix P. The means for the far west region ranged from a low of 2.67 for skill #75 (use examples from the history of mathematics) to a high of 4.74 for skill #1 (determine main idea). The means for the southern region ranged from a low of 2.90 for skill #75 to a high of 4.81 for skill #44 (recognize basic grammatical errors). The means for the central region ranged from a low of 2.63 for skill #75 to a high of 4.75 for skill #1. The means for the northeast region ranged from a low of 2.70 for skill #75 to a high of 4.82 for skill #1. Nine enabling skills received mean importance ratings of less than 3.50 by one or more of the regional subgroups. These nine skills and their means are presented in Table 14. The exclusion of these nine skills leaves 93% of the content domain ( n = 125) eligible for inclusion in the assessment measures.

**Table 14**

**Mean Importance Ratings by Geographic Region for the Nine Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | FAR WEST | SOUTHERN | CENTRAL | NORTHEAST |
|---|---|---|---|---|
| **READING** | | | | |
| 14. Recognize style | 3.26 | 3.48 | 3.27 | |
| **MATHEMATICS** | | | | |
| 60. Interpret mean, median, mode | 3.49 | | | |
| 61. Interpret range, variance, S.D. | 3.10 | 3.36 | 3.18 | 3.26 |
| 63. Recognize relationships among variables | 3.13 | 3.32 | 3.12 | 3.22 |
| 65. Write equations using variables | 3.46 | | 3.42 | |
| 66. Recognize patterns | 3.31 | 3.45 | 3.28 | 3.38 |
| 67. Use formulas for determining length | 3.46 | | 3.46 | |
| 75. Use examples from history of math | 2.67 | 2.90 | 2.63 | 2.70 |
| **LISTENING** | | | | |
| 100. Understand spoken English dialects | 3.38 | 3.64 | 3.38 | |

Agreement in Relative Importance Among Regions. The correlations among the profile of 134 means for the regions are presented in Table 15. All values exceeded .95, indicating that the distributions of mean ratings among the different geographic regions are highly similar.

Table 15

Intercorrelation Matrix of Mean Ratings of Enabling Skill Importance

| | Far West | Southern | Central | Northeast |
|---|---|---|---|---|
| Far West | | .98 | .99 | .98 |
| Southern | | | .99 | .98 |
| Central | | | | .98 |
| Northeast | | | | |

Summary of Results for the Primary Group of Teacher Respondents

The results of the frequency analysis indicated that three enabling skills all within the dimension of Mathematics were judged to be of little importance or of no importance by more than 20% of the respondents. Twenty-one percent judged enabling skill #61 (interpret range, variance, and standard deviation) to be of little or no importance; 25% made the same judgment for #63 (recognize relationships among variables); and 42% made the same judgment for #75 (use examples from the history of math). The mean analyses across the relevant subgroups revealed a total of 21 enabling skills that had a mean importance rating of less than 3.50. These enabling skills and their mean values are presented in Table 16. With the exclusion of these 21 enabling skills, 84% of the enabling skills content domain still is eligible for inclusion in the development of examination specifications. Finally, like the results for the constituent respondents, the mean importance ratings for primary group of teacher respondents were highly reliable. The subgroup analyses indicated that the importance ratings were very similar regardless of race/ethnicity, sex, subject taught, school setting, school level, and geographic region. The subgroup analysis also revealed that many of the enabling skills that did not meet the 3.50 standard were attributable to the subject taught by the respondents. In particular, business and vocational education accounted for most of the enabling skills judged to be less than 3.50. In addition, more than 80% of the enabling skills met or exceeded the mean rating standard of 3.50 within each of the relevant subgroups.

Section 3: Teacher Respondents: Supplementary Group

The results for the supplementary group of teacher respondents first will be presented at the aggregate level. Then the results of the mean analysis will be presented for the Black and Hispanic respondents. Finally, the extent of agreement in the relative importance of the enabling skills ratings between these subgroups will be presented.

Total Group of Respondents

Description of Survey Respondents. Of the 1,500 surveys, 312 (21% response rate) were returned. Thirty-nine percent of the respondents were Black; 40% were Hispanic; and 39% were White non-Hispanic (the percentage for race/ethnicity was greater than 100 due to multiple responses). Thirty-six percent were from an urban school setting; 32% were from a suburban setting; and 32% were from a rural setting. Sixty-five percent were between the ages of 35 and 54 years. Seventy-one percent had 11 or more years of teaching experience. Seventy-

**Table 16**

**Mean Importance Ratings by All Relevant Subgroups for the 21 Enabling Skills That Did Not Meet the 3.50 Standard - Primary Teacher Respondents**

| | B | W | H | U | Sb | R | E | M | S | FW | S | C | NE | F | M | 5 | 9 | 11 | 19 | 21 | BV | SS | PS | MC | LA | SE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **READING** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Recognize persuasive techniques | | | | | | | | | | | | | | | | | | | | | 3.50 | | | | | |
| 14. Recognize style | | 3.36 | 3.46 | 3.42 | 3.37 | 3.31 | | 3.50 | 3.35 | 3.26 | 3.46 | 3.27 | | 3.47 | 3.46 | 3.46 | 3.31 | 3.39 | 3.39 | 3.34 | 3.57 | 3.43 | 3.37 | 3.11 | | 3.32 |
| 16. Recognize ideas/situations | | | | | | | | | | | | | | | | | | | | | 3.44 | | | | | |
| 17. Determine author's purpose | | | | | | | | | | | | | | | | | | | | | 3.33 | | | 3.44 | | |
| 26. Identify what author assumes | | | | | | | | | | | | | | | | | | | | | 3.49 | | | | | |
| **MATHEMATICS** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60. Interpret Mean, Median, Mode | | | | | | 3.40 | | | | 3.40 | | | | | 3.49 | | | | | | 3.39 | 3.49 | | | | |
| 61. Interpret Range, Variance, S.D. | 3.47 | 3.19 | 3.44 | 3.39 | 3.19 | 3.19 | 3.36 | 3.22 | 3.19 | 3.19 | 3.36 | 3.18 | 3.39 | | 3.13 | 3.36 | 3.12 | 3.23 | 3.31 | 3.22 | 3.11 | 3.18 | 3.38 | 3.15 | 3.31 | 3.18 |
| 63. Recognize relationships among variables | 3.46 | 3.17 | 3.46 | 3.23 | 3.16 | 3.39 | 3.19 | 3.31 | 3.39 | 3.13 | 3.32 | 3.12 | 3.23 | | 3.27 | 3.39 | 3.15 | 3.11 | 3.31 | 3.33 | 3.19 | 3.46 | | | 3.03 | 3.01 |
| 66. Write equations using variables | | 3.46 | | | | 3.46 | | | 3.42 | 3.46 | | 3.39 | | | 3.49 | | | | | 3.44 | 3.39 | 3.39 | | | 3.28 | 3.49 |
| 68. Recognize patterns | | 3.33 | | 3.36 | 3.37 | 3.33 | | 3.31 | 3.27 | 3.31 | 3.46 | 3.28 | 3.39 | | 3.30 | 3.46 | 3.36 | 3.29 | 3.36 | 3.36 | 3.09 | 3.14 | | 3.48 | 3.29 | 3.24 |
| 67. Use formulas for determining length | | | | | 3.48 | | | | 3.41 | 3.46 | | 3.46 | | | | | | | | | 3.34 | 3.39 | | | 3.27 | 3.47 |
| 69. Use various systems of measurement | | | | | | | | | | | | | | | | | | | | | 3.46 | | | | | |
| 69. Convert units among measurement sys. | | | | | | | | | | | | | | | | | | | | | | | | 3.32 | | 3.48 |
| 70. Interpret logical connectives | | | | | | | | | | | | | | | | | | | | | 3.34 | | | | | |
| 71. Use deductive/inductive reasoning | | | | | | | | | | | | | | | | | | | | | 3.41 | | | | | |
| 73. Draw correct conclusions | | | | | | | | | | | | | | | | | | | | | 3.33 | | | | | 3.45 |
| 74. Demonstrate fundamental algorithms | | | | | | | | | 3.43 | | | | | | 3.47 | | | | | | 3.45 | 3.39 | | | 3.41 | |
| 75. Use examples from history of math | 3.19 | 3.47 | 3.13 | 3.23 | 3.00 | 3.73 | 3.00 | 3.76 | 3.43 | 3.47 | 3.00 | 3.43 | 3.70 | 3.73 | 3.00 | 3.75 | 3.71 | 3.64 | 3.69 | 3.78 | 3.41 | 3.70 | 3.41 | 3.05 | 3.07 | 3.04 |
| 78. Use a variety of materials | | | | | | | | | 3.36 | | | | | | 3.48 | | | | | | 3.39 | 3.28 | | | 3.42 | |
| **LISTENING** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 79. Recall actual wording of message | | | | | | | | | | | | | | | | | | | | | | | | 3.38 | | |
| 100. Understand spoken English dialects | | 3.43 | | | 3.49 | 3.44 | | | 3.39 | 3.36 | 3.44 | 3.36 | | | 3.39 | | | | 3.38 | 3.44 | 3.36 | 3.42 | 3.39 | 3.39 | | |

Note: B = Black; W = White; H = Hispanic; U = Urban; Sb = Suburban; R = Rural; E = Elementary; M = Middle; S = Secondary; FW = Far West region; S = Southern region; C = Central region; NE = Northeast region; F = Female; M = Male; 5 = 5 years or less; 9 = 6-10 years; 11 = 11-15 years; 19 = 16-20 years; 21 = 21 years or more; BV = Business and Vocational Education; SS = Social Sciences; PS = Physical and Biological Sciences; MC = Mathematics and Computer Science; LA = Language Arts; SE = Special Education



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seven percent were female and 24% were male. Thirty-eight percent of the respondents were elementary school teachers; 27% were middle school teachers; and 33% were secondary school teachers.

Since the intent of including the supplementary group of teacher respondents was to augment minority representation, those respondents who described themselves as White non-Hispanic were excluded. After correcting for this, the total number of minority (i.e., Black and Hispanic) respondents was 236. Of this 236, 48% (n = 114) were Black, and 52% (n = 122) were Hispanic. The responses from the 236 minority teachers were used in all subsequent analyses.

Frequency Distributions Across Response Categories. The percent of respondents who judged each enabling skill to be of little importance or of no importance and very important or extremely important is presented in Appendix M. Of the 134 enabling skills, 2 were judged to be of little importance or of no importance by more than 20% of the respondents. These two skills were within the dimension of Mathematics: #63 (recognize relationships among variables, 21%) and #75 (use examples from the history of mathematics, 36%). The other 132 enabling skills (99% of the content domain) may be considered to be eligible for inclusion in the Stage I assessments. In addition, 99% of the enabling skills were judged to be either very important or extremely important by 50% or more of the respondents.

Mean Ratings of Enabling Skill Importance. The mean importance rating for each of the 134 enabling skills is presented in Appendix M. Sixty-four percent of the enabling skills had a mean rating of 4.00 or higher. The means ranged from a low of 2.91 for enabling skill #75 (use examples from the history of mathematics) to a high of 4.70 for enabling skill #19 (use table of contents). Four enabling skills received mean importance ratings of less than 3.50. All four were within the dimension of Mathematics: #61 (interpret range, variance, standard deviation, $\underline{M} = 3.39$); #63 (recognize relationships among variables, $\underline{M} = 3.28$); #66 (recognize patterns, $\underline{M} = 3.49$); and #75 (use examples from the history of mathematics, $\underline{M} = 2.91$). The exclusion of these four enabling skills leaves 97% of the content domain (n = 130) eligible for inclusion in the assessment measures.

Reliability of Importance Ratings. Group split half and intraclass correlations were computed to determine the reliability of the importance ratings provided by the supplementary group of teacher respondents. The group split half reliability estimate was .98; and the intraclass correlation reliability was .97, indicating an extremely high level of reliability.

Responses by Race/Ethnicity

Mean Ratings of Enabling Skill Importance. Mean importance ratings were computed for Black and Hispanic respondents. The mean importance ratings and standard deviations are presented in Appendix N. The means for Black respondents ranged from a low of 3.02 for skill #75 (use examples from the history of mathematics) to a high of 4.74 for skill #19 (use table of contents). The means for Hispanic respondents ranged from a low of 2.82 for skill #75 to a high of 4.68 for skill #44 (recognize basic grammatical errors). Seven enabling skills received mean importance ratings of less than 3.50 by at least one of the two subgroups. These seven skills and their means are presented in Table 17. The exclusion of these seven enabling skills leaves 95% of the content domain (n = 127) eligible for inclusion in the assessment measures.

Table 17

Mean Importance Ratings by Race/Ethnicity for the Seven Enabling Skills That Did Not Meet the 3.50 Standard - Supplementary Teacher Respondents

| | BLACK | HISPANIC |
|---|---|---|
| **MATHEMATICS** | | |
| 61. Interpret range, variance, S.D. | 3.37 | 3.41 |
| 63. Recognize relationships among variables | 3.26 | 3.29 |
| 66. Recognize patterns | 3.45 | |
| 68. Use various systems of measurement | | 3.47 |
| 70. Interpret logical connectives | 3.48 | |
| 74. Draw correct conclusions | 3.49 | |
| 75. Use examples from history of mathematics | 3.02 | 2.82 |

Agreement in Relative Importance Between Races/Ethnicities. In order to determine the extent of agreement between Black and Hispanic respondents as to the relative importance of the enabling skills, Pearson product-moment correlations were computed. The profile of 134 mean importance ratings for each subgroup was correlated. The obtained correlation was .96, indicating a very high level of agreement.

Summary of Results for the Supplementary Group of Teacher Respondents

The results of the frequency analysis indicated that two enabling skills within the dimension of Mathematics were judged to be of little importance or of no importance by more than 20% of the respondents. Twenty-one percent of the respondents judged enabling skill #63 (recognize relationships among variables) to be of little or no importance; and 36% made the same judgment for skill #75 (use examples from the history of mathematics). The mean analysis revealed seven enabling skills that had a mean importance rating of less than 3.50. All seven skills were within the dimension of Mathematics: #61 (interpret range, variance, and standard deviation); #63; #66 (recognize patterns); #68 (use various systems of measurement); #70 (interpret logical connectives); #72 (draw correct conclusions); and #75. The mean values for these seven enabling skills are presented in Table 17. With the exclusion of these seven enabling skills, 95% of the enabling skills content domain still is eligible for inclusion in the development of examination specifications. In addition, the analyses of interrater reliability indicated that the importance ratings provided by the supplementary group of teacher respondents were highly reliable.

Summary of Results: Constituent, Primary Teacher, and Supplementary Teacher Respondents

The first three sections of this report presented the results of the frequency and mean analyses for each of the respondent groups respectively. In each instance, the mean analysis proved to be a more conservative measure than the frequency analysis: it resulted in the exclusion of a greater number of enabling skills.

The interrater reliability of the mean importance ratings for each of the three

respondent groups was estimated using group split half correlations and intraclass correlations. Both measures yielded extremely high reliability estimates (greater than .90) for each of the respondent groups. This indicates that highly similar distributions of mean importance ratings would be obtained from other groups of constituent, primary and supplementary teacher respondents who had been selected and surveyed in a similar manner.

In addition, the extent of agreement among the relevant subgroups of teachers (within both primary and supplementary groups) in terms of the relative importance of the enabling skills was measured. This was accomplished by correlating the profiles of the 134 means for the different subgroups (e.g., females vs. males). Only two correlations below .90 were obtained. Both were .85 and were obtained in the comparison of mean importance ratings by subject taught.

Section 4: Comparisons Across Constituent, Primary, and Supplementary Teacher Respondents

Mean Ratings of Enabling Skill Importance. Across all respondent groups (and relevant subgroups), only 21 of the 134 enabling skills (approximately 16% of the content domain) received mean importance ratings of less than 3.50. These 21 enabling skills and their mean ratings are presented in Table 18 (see page 27). Unless the Test Development Committee provides strong rationale to the contrary, these enabling skills should not be included in the Stage I assessment measures. The results of this study clearly demonstrate that 84% of the enabling skills content domain was judged to be important by large numbers of teachers, and other professional and school-related community groups. These results may be used to support the development of a single examination that is appropriate for all teaching candidates regardless of sex, race/ethnicity, school level, subject taught, and geographic location.

Agreement in Relative Importance Among Respondents. Similar to the subgroup analyses, the profiles of 134 means for each of the three respondent groups were correlated. The obtained values are presented in Table 19. As illustrated, all the values exceeded .90, indicating a very high level of agreement among the respondent groups. In addition, correlations of the mean profiles for the Black and Hispanic teachers from the primary and supplementary groups were computed to determine the extent to which both sets of minority teachers agreed in their ratings of relative importance. These values are presented in Table 20 (see page 28). As illustrated, all the correlations were in the .90s, indicating that both sets of minority teachers shared very similar perceptions of the relative importance of the enabling skills. This information coupled with the information summarized in Table 18, provides substantial evidence in support of a highly agreed upon core of important enabling skills.

**Table 19**

**Intercorrelation Matrix of Mean Ratings of Enabling Skill Importance**

| | Constituent | Primary Teacher | Supplementary |
|---|---|---|---|
| Constituent | | .97 | .92 |
| Primary Teacher | | | .99 |
| Supplementary Teacher | | | |

**Table 18**

## Mean Importance Ratings for the 21 Enabling Skills that Did Not Meet the 3.50 Standard - All Respondent Groups and Relevant Subgroups

| | Supplementary Teacher Respondents | | Primary Teacher Respondents | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | B | H | B | W | H | F | M | U | Sb | R | E | M | S | 5 | 6 | 11 | 16 | 21 | BV | SS | PS | MC | LA | SE | FW | So | C | NE |
| **READING** | | | | | | | | | | | | | | | | | | | | 3.36 | | | | | | | | | |
| 6. Recognize persuasive techniques | | | | | 3.39 | 3.46 | 3.47 | 3.15 | 3.42 | 3.37 | 3.31 | | 3.39 | 3.35 | 3.46 | 3.31 | 3.30 | 3.39 | 3.36 | 3.37 | 3.43 | 3.37 | 3.11 | | 3.32 | 3.39 | 3.46 | 3.37 | |
| 14. Recognize style | | | | | | | | | | | | | | | | | | | | 3.44 | | | | | | | | | |
| 16. Recognize ideas/situations | | | | | | | | | | | | | | | | | | | | 3.33 | | | 3.44 | | | | | | |
| 17. Determine author's purpose | | | | | | | | | | | | | | | | | | | | 3.46 | | | | | | | | | |
| 25. Identify what author assumes | | | | | | | | | | | | | | | | | | | | | | | | | | 3.49 | | | |
| **MATHEMATICS** | | | | | | | | 3.49 | | | 3.49 | | | | | | | | | 3.30 | 3.49 | | | | | | | | |
| 60. Interpret Mean, Median, Mode | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 61. Interpret Range, Variance, S.D. | | 3.37 | 3.41 | 3.47 | 3.19 | 3.44 | | 3.13 | 3.39 | 3.19 | 3.19 | 3.39 | 3.22 | 3.19 | 3.39 | 3.13 | 3.32 | 3.21 | 3.22 | 3.11 | 3.18 | 3.33 | 3.18 | 3.19 | 3.36 | 3.19 | 3.36 | |
| 63. Recognize relationships among variables | 3.47 | 3.36 | 3.39 | 3.46 | 3.17 | 3.46 | | 3.37 | 3.33 | 3.19 | 3.39 | 3.19 | 3.31 | 3.39 | 3.39 | 3.15 | 3.11 | 3.31 | 3.23 | 3.19 | 3.06 | | | 3.03 | 3.01 | 3.13 | 3.32 | 3.12 | 3.33 |
| 65. Write equations using variables | | | | | 3.46 | | | 3.46 | | | 3.46 | | | 3.42 | | | | | 3.44 | 3.38 | 3.39 | | | 3.39 | 3.40 | 3.46 | | 3.42 | |
| 66. Recognize patterns | | 3.48 | | | 3.33 | | | 3.39 | 3.36 | 3.37 | 3.33 | | 3.31 | 3.37 | 3.46 | 3.36 | 3.39 | 3.36 | 3.36 | 3.46 | 3.14 | | 3.46 | 3.39 | 3.39 | 3.31 | 3.45 | 3.39 | 3.36 |
| 67. Use formulas for determining length | | | | | | | | | | 3.46 | | | | 3.41 | | | | | | 3.34 | 3.39 | | | 3.37 | 3.47 | 3.46 | | 3.46 | |
| 68. Use various systems of measurement | | | 3.47 | | | | | | | | | | | | | | | | | 3.46 | | | 3.33 | | 3.48 | | | | |
| 69. Convert units among measurement sys. | | | | | | | | | | | | | | | | | | | | 3.34 | | | | | | | | | |
| 70. Interpret logical connectives | | 3.48 | | | | | | | | | | | | | | | | | | 3.41 | | | | | | | | | |
| 71. Use deductive/inductive reasoning | | | | | | | | | | | | | | | | | | | | 3.33 | | | | | 3.48 | | | | |
| 72. Draw correct conclusions | | 3.49 | | | | | | | | | | | | 3.42 | | | | | | 3.45 | 3.39 | | | 3.41 | | | | | |
| 74. Demonstrate fundamental algorithms | | | | | | | | 3.47 | | | | | | | | | | | | 3.41 | | | | | | | | | |
| 75. Use examples from history of math | 3.90 | 3.62 | 3.62 | 3.10 | 3.07 | 3.12 | 2.73 | 3.09 | 3.03 | 3.00 | 2.73 | 3.00 | 2.76 | 3.03 | 2.75 | 2.71 | 3.04 | 3.09 | 2.79 | 3.01 | 3.79 | 3.01 | 3.05 | 3.07 | 3.04 | 3.07 | 3.09 | 3.03 | 2.79 |
| 76. Use a variety of materials | | | | | | | | 3.49 | | | | | | 3.36 | | | | | | 3.30 | 3.39 | | | 3.43 | | | | | |
| **LISTENING** | | | | | | | | | | | | | | | | | | | | | | | 3.36 | | | | | | |
| 79. Recall actual wording of message | | | | | | | | | | | | | | | | | | 3.36 | 3.44 | 3.35 | 3.42 | 3.39 | 3.36 | | | 3.36 | 3.04 | 3.36 | |
| 100. Understand spoken English dialects | | | | | 3.43 | | | 3.29 | | 3.40 | 3.44 | | | 3.39 | | | | | | | | | | | | | | | |

Note: C = Constituencies; B = Black; W = White; H = Hispanic; F = Female; M = Male; U = Urban; Sb = Suburban; R = Rural; E = Elementary; M = Middle; S = Secondary; 5 = 5 years or less; 6 = 6-10 years; 11 = 11-15 years; 16 = 16-20years; 21 = 21 years or more; BV = Business and Vocational Education; SS = Social Sciences; PS = Physical and Biological Sciences; MC = Mathematics and Computer Science; LA = Language Arts; SE = Special Education; FW = Far West; So = Southern; C = Central; N = Northeast





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Table 20

Intercorrelation Matrix of Profiles of Mean Importance Ratings for Black and Hispanic Teacher Respondents: Primary and Supplementary Groups

| | Supplementary Teacher Respondents | |
|---|---|---|
| Primary Teacher Respondents | Black | Hispanic |
| Black | .96 | .97 |
| Hispanic | .90 | .91 |

## Mean Importance Ratings of the Six Enabling Skill Dimensions

In order to obtain an overall rating of enabling skill dimension importance, the mean importance for each of the six enabling skill dimensions was calculated for the three respondent groups. The means were computed by summing the importance ratings for each of the enabling skills within a particular dimension and then dividing by the number of enabling skills. The means and standard deviations are presented in Table 21. As illustrated, all the dimensions were judged to be important (scale value of 4) by the three groups.

Table 21

Mean Importance Ratings of the Six Enabling Skill Dimensions

| | Constituent Respondents | | Primary Teacher Respondents | | Supplementary Teacher Respondents | |
|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| Enabling Skill Dimension | | | | | | |
| Reading | 4.22 | 0.82 | 4.07 | 0.88 | 4.09 | 0.55 |
| Writing | 4.47 | 0.70 | 4.33 | 0.77 | 4.35 | 0.52 |
| Mathematics | 4.02 | 0.92 | 3.83 | 1.03 | 3.86 | 0.87 |
| Speaking | 4.47 | 0.71 | 4.50 | 0.68 | 4.42 | 0.54 |
| Listening | 4.20 | 0.84 | 4.07 | 0.88 | 4.03 | 0.62 |
| Interactive Communication Skills | 4.29 | 0.75 | 4.24 | 0.77 | 4.20 | 0.52 |

## Verification of Content Domain Coverage

To determine if the enabling skills content domain was perceived to be comprehensively defined, the respondents indicated (at the dimension level) how well the survey covered the important enabling skills. These judgments were made using a 5-point rating scale ranging from 1 (poorly) to 5 (very well). The results of these judgments are presented in Table 22. All three groups of respondents perceived the enabling skills content domain to have been well defined (a rating of at least 4.00).

Table 22

Mean Ratings of Content Domain Coverage

| | Constituent Respondents | | Primary Teacher Respondents | | Supplementary Teacher Respondents | |
|---|---|---|---|---|---|---|
| | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| Enabling Skill Dimension | | | | | | |
| Reading | 4.47 | 0.69 | 4.29 | 0.97 | 4.30 | 0.82 |
| Writing | 4.48 | 0.62 | 4.28 | 0.97 | 4.35 | 0.76 |
| Mathematics | 4.24 | 0.77 | 4.01 | 1.12 | 4.16 | 0.89 |
| Speaking | 4.51 | 0.68 | 4.39 | 0.95 | 4.46 | 0.78 |
| Listening | 4.48 | 0.67 | 4.35 | 0.97 | 4.43 | 0.82 |
| Interactive Communication Skills | 4.33 | 0.79 | 4.23 | 1.02 | 4.32 | 0.76 |

Recommendations for Test Content Emphasis

The respondents were instructed to estimate the number of examination items that they believed should be included from each of the enabling skill dimensions. They indicated this by distributing 100 points (in whole numbers) across the six dimensions. These judgments of relative weight (emphasis) are important because the assessment measures should not only reflect the most important enabling skills, but reflect them in their appropriate proportions (Standards for Educational and Psychological Testing, 1985). These weights are presented in Table 23. Both groups of teacher respondents believed that Reading, Writing, and Mathematics should receive the most emphasis. The constituent respondents also emphasized Reading and Writing, but believed that Interactive Communication Skills should receive slightly more emphasis than Mathematics.

Table 23

Mean Number of Examination Items (out of 100) to be Included for Each Enabling Skill Dimension

| | Constituent Respondents | | Primary Teacher Respondents | | Supplementary Teacher Respondents | |
|---|---|---|---|---|---|---|
| | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| Enabling Skill Dimension | | | | | | |
| Reading | 20.36 | 6.17 | 20.91 | 7.38 | 22.19 | 7.33 |
| Writing | 18.21 | 5.19 | 17.82 | 6.41 | 17.76 | 5.50 |
| Mathematics | 15.94 | 5.87 | 16.88 | 7.52 | 18.31 | 7.42 |
| Speaking | 14.42 | 4.86 | 15.50 | 6.35 | 14.99 | 5.56 |
| Listening | 14.24 | 4.86 | 15.07 | 6.21 | 14.92 | 5.93 |
| Interactive Communication Skills | 16.89 | 7.14 | 14.85 | 7.81 | 13.81 | 6.54 |

## Conclusions

The purpose of this study was to identify a core of important enabling skills for entry-level teachers on which there is substantial agreement by practicing teacher and constituent groups. This core will be used to guide the development of the Stage I assessment measures. To identify the core, three groups of practicing professionals were administered (in survey format) an enabling skills content domain. Using a 5-point importance rating scale, they were instructed to judge the importance of each enabling skill for entry-level teachers regardless of school level or subject-matter they teach. To be considered eligible for inclusion in the assessment measures it was recommended that an enabling skill's mean importance rating meet or exceed 3.50 (the midpoint between moderately important and very important on the rating scale), and fewer than 20% of the respondents judged it to be of little importance or of no importance. These two standards were selected because it was believed that they significantly decrease the probability of any unimportant enabling skills being included in the assessment measures. In addition, to decrease the likelihood that these standards may inadvertently exclude "critical" enabling skills, provision was made for the Test Development Committee to reinstate skills that did not meet the standards, if the Committee could provide a strong rationale in support of its decision.

Overall, 113 enabling skills (84% of the content domain) met both the frequency and mean standards. These enabling skills were judged to be important by all practicing teachers and constituent groups. The result of this high convergence of judgment is that there is a strong empirical basis for the development of a single examination that is appropriate for all teaching candidates. The results of this study should be used by the Test Development Committee to develop examination specifications. There should be an explicit and documented link between the results of this study and the specifications. In addition, the specifications should reflect the most important enabling skills identified (skills should be selected that are as far above the 3.50 standard as possible, without impeding the content representativeness of the specifications).

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Appendix D

- Job Analysis Survey: A Description of Enabling Skills for Teachers

- Demographic Section: Teachers

- Demographic Section: Constituencies

# A DESCRIPTION OF ENABLING SKILLS

# FOR TEACHERS

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By

Educational Testing Service
Princeton, New Jersey
January, 1990

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## INTRODUCTION

Educational Testing Service (ETS) is attempting to describe and define the enabling skills that all entry-level teachers should possess. The information obtained from the questionnaire will assist us in identifying the content to be included in the successor to the NTE.

This questionnaire is divided into three related parts:

PART I: DESCRIPTION OF ENABLING SKILLS

PART II: RECOMMENDATIONS FOR TEST CONTENT EMPHASIS

PART III: DEMOGRAPHIC INFORMATION

It is important for you to complete ALL THREE PARTS of this questionnaire. Your cooperation and participation in this project is greatly appreciated.

## PART I: DESCRIPTION OF ENABLING SKILLS

The description of enabling skills included in this questionnaire has been developed in cooperation with teachers, administrators, and teacher educators.

On the following pages you will find a list of six enabling skill areas and within each a list of specific enabling skills. The six enabling skill areas are:

1. Reading
2. Writing
3. Mathematics
4. Listening
5. Speaking
6. Interactive Communication Skills

### Using the Rating Scale

For each specific enabling skill you will be asked to make the following judgment using the rating scale below:

**Rating Scale**

| Regardless of the subject-matter area or grade they teach, how IMPORTANT is it that all ENTRY-LEVEL teachers be able to do the following? (Circle the number on the scale that best reflects your judgment.) |
|---|
| (1) Of no importance |
| (2) Of little importance |
| (3) Moderately important |
| (4) Very important |
| (5) Extremely important |

Regardless of the subject area or grade they teach, how important is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

---

| I. READING | IMPORTANCE |
|---|---|
| **A. Understanding the content of a reading selection. Entry-level teachers should be able to** | |
| 1. Determine the main idea or gist of a reading selection. | 1 2 3 4 5 |
| 2. Locate important ideas in a reading selection and explain why these ideas are important. | 1 2 3 4 5 |
| 3. Identify accurate paraphrases or summaries of ideas in a reading selection. | 1 2 3 4 5 |
| 4. Determine the supporting ideas in a reading selection: ideas, details, or facts that support the author's main idea. | 1 2 3 4 5 |
| **B. Understanding the argument of a reading selection. Entry level teachers should be able to** | |
| 5. Recognize the presence of an argument in a reading selection. | 1 2 3 4 5 |
| 6. Determine whether facts or ideas are relevant to an argument in a reading selection. | 1 2 3 4 5 |
| 7. Identify particular strengths or weaknesses in the author's arguments. | 1 2 3 4 5 |
| 8. Recognize the various persuasive techniques used by an author in a reading selection. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

| I. | READING (continued) | IMPORTANCE |
|---|---|---|
| | 9. Recognize elements of a reading selection that are intended to arouse emotions of the reader or to manipulate his or her thinking in a particular direction. | 1 2 3 4 5 |
| | 10. Identify logical assumptions upon which the author bases the argument of a reading selection. | 1 2 3 4 5 |
| | 11. Recognize the point of view used by an author. | 1 2 3 4 5 |
| C. | **Understanding the implied content of a reading selection.** Entry-level teachers should be able to | |
| | 12. Perceive what is implied rather than directly stated by the author and make inferences from the directly stated content of a reading selection. | 1 2 3 4 5 |
| | 13. Recognize the attitude expressed in the reading selection by the author toward his or her subject. | 1 2 3 4 5 |
| | 14. Recognize the style or manner of expression used by the author. | 1 2 3 4 5 |
| | 15. Distinguish between what a writer presents as fact from the writer's opinions. | 1 2 3 4 5 |
| | 16. Recognize or predict ideas or situations that are extensions of what has been presented in a reading selection. | 1 2 3 4 5 |
| | 17. Determine the author's purpose in writing a reading selection. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

---

| I. | READING (continued) | IMPORTANCE |
|---|---|---|
| D. | **Understanding the organization of a reading selection.** Entry-level teachers should be able to | |
| 18. | Understand how a reading selection is organized (e.g., compare and contrast, problem and solution, description). | 1 2 3 4 5 |
| 19. | Use the table of contents, section headings, index, and similar sections of a book to locate information. | 1 2 3 4 5 |
| 20. | Arrange the ideas in a reading selection into an outline, a concept map, or into some other form of graphic organizer. | 1 2 3 4 5 |
| 21. | Identify the relationships among ideas directly stated in the reading selection (e.g., relationships of cause and effect, and sequence). | 1 2 3 4 5 |
| 22. | Determine implied relationships between general and specific ideas in a reading selection (e.g., a paragraph on the causes of the Civil War and a number of specific examples of what might have caused them). | 1 2 3 4 5 |
| 23. | Locate the place in a reading selection where a specific kind of information can be found (e.g., The author mentions the gestation period of ducks in paragraph?). | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how important is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

| I. READING (continued) | | IMPORTANCE |
|---|---|---|
| E. | **Understanding the way in which language is used in a reading selection.** Entry-level teachers should be able to | |
| 24. | Recognize and identify different interpretations that can be made of the same word, sentence, paragraph, or reading selection. | 1 2 3 4 5 |
| 25. | Identify what the author assumes that a reader knows when a specific word or phrase is used. | 1 2 3 4 5 |
| 26. | Recognize how the meaning of a word, sentence, or paragraph is affected by the context in which it appears. | 1 2 3 4 5 |
| 27. | Determine the meanings of figurative language in a reading selection (e.g., "heart of a lion"). | 1 2 3 4 5 |
| 28. | Understand the function of key transition indicators in a reading selection (e.g., "however", "by contrast", "in conclusion"). | 1 2 3 4 5 |
| F. | **Understanding other features of a reading selection.** Entry-level teachers should be able to | |
| 29. | Compare or combine ideas or information found in two or more sources. | 1 2 3 4 5 |
| 30. | Identify inconsistencies or differences in points of view in a reading selection or two or more such selections. | 1 2 3 4 5 |
| 31. | Specify appropriate reference sources for locating a specific kind of information (e.g., for synonyms, use a dictionary or a thesaurus; for information about the weather, use a newspaper or almanac). | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

| I. READING (continued) | | IMPORTANCE |
|---|---|---|
| 32. | Understand reading materials with various writing styles and various difficulty levels. | 1 2 3 4 5 |

II. WRITING

Composing Skills

| | | |
|---|---|---|
| 33. | Describe an event or situation. | 1 2 3 4 5 |
| 34. | Delineate the steps in a process or procedure (e.g., explain how to do something). | 1 2 3 4 5 |
| 35. | Support a position for or against something. | 1 2 3 4 5 |
| 36. | Analyze ideas and information in various ways, for instance,<br><br>-explaining the cause and effect of something<br>-comparing and contrasting different points of view<br>-drawing conclusions based on evidence provided | 1 2 3 4 5 |
| 37. | Provide a clear focus or thesis. | 1 2 3 4 5 |
| 38. | Produce and develop supporting material that explains or illustrates key ideas. | 1 2 3 4 5 |
| 39. | Organize ideas effectively and logically. | 1 2 3 4 5 |
| 40. | Use vocabulary appropriate to the purpose of writing and the audience addressed. | 1 2 3 4 5 |
| 41. | Present ideas in writing in an imaginative way. | 1 2 3 4 5 |
| 42. | Present alternative points of view in writing. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

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| II. <u>WRITING</u> (continued) | <u>IMPORTANCE</u> |
|---|---|
| 43. Produce writing that is free of errors in grammar, punctuation, and spelling. | 1 2 3 4 5 |
| <u>Editing and Revising Skills</u> | |
| 44. Recognize basic grammatical errors in standard written English. These errors might involve:<br>-verb forms (had brung)<br>-verb tense (yesterday I am making)<br>-agreement of subject and verb (one of the books are)<br>-pronoun case (between him and I)<br>-punctuation ("it's" when "its" is meant) | 1 2 3 4 5 |
| 45. Recognize effective sentence structure free of problems. These problems might involve:<br>-misplaced modifiers (Not this: This computer is seldom used even though it is the most effective because of the high cost. But this: Even though it is most effective, this computer is seldom used because of the high cost.)<br>-faulty subordination (Not this: Seeing the boat in the water, it hardly looked seaworthy. But this: Seeing the boat in the water, I decided that it hardly looked seaworthy.)<br>-faulty parallel structure (Not this: She promised to buy a copy of the book and that she would make it available to students. But this: She promised to buy a copy of the book and to make it available to students.) | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

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| II. | WRITING (continued) | IMPORTANCE |
|---|---|---|
| 46. | **Recognize language that creates an inappropriate and/or inconsistent tone, given the intended audience and purpose for writing.** Such inappropriate language might involve:<br><br>-colloquialisms or slang in a formal report<br>-sarcasm in a letter when respect is intended | 1 2 3 4 5 |
| 47. | **Revise sentences to correct basic problems in standard written English.** These problems might include:<br><br>-"had went" for "had gone"<br>-"accept" when "except" is intended | 1 2 3 4 5 |
| 48. | **Revise paragraphs to create appropriate and consistent tone, given the intended audience and purpose for writing.** These paragraphs might be excerpts from:<br><br>-an explanation to a group of students<br>-a proposal to a school board | 1 2 3 4 5 |
| 49. | **Revise paragraphs to clarify meaning.** The revision might address confusion resulting from such problems as:<br><br>-illogical transitions<br>-unnecessary repetition<br>-vague references<br>-imprecise language<br>-irrelevant ideas | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

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| III. | MATHEMATICS | IMPORTANCE |
|---|---|---|
| 50. | Recognize the position of numbers in relation to each other (e.g., 1/3 is between 1/4 and 1/2; $-7 < -4$). | 1 2 3 4 5 |
| 51. | Recognize equivalent forms of a number (e.g., 1/2 = 2/4 = 3/6 = 4/8 =...; 1/10 = 0.1 = $10^{-1}$ = 10%). | 1 2 3 4 5 |
| 52. | Solve problems by estimating answers (e.g., arrive at a reasonable, but not necessarily exact, answer by using a minimal amount of computation). | 1 2 3 4 5 |
| 53. | Use the form of a number that is appropriate in the context of a problem (e.g., rounding to the nearest whole number). | 1 2 3 4 5 |
| 54. | Demonstrate an understanding of the characteristics of counting numbers (e.g., prime or composite, even or odd). | 1 2 3 4 5 |
| 55. | Interpret and apply ratio, proportion, and percent in appropriate situations. | 1 2 3 4 5 |
| 56. | Perform computations (e.g., addition, subtraction, multiplication, division) in problem solving situations. | 1 2 3 4 5 |
| 57. | Read and interpret information contained in various kinds of graphs (bar, line, circle, pictographs), charts, and tables. | 1 2 3 4 5 |
| 58. | Recognize relationships in numerical data (e.g., compute a percentage change from one year to the next). | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

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| III. | MATHEMATICS (continued) | IMPORTANCE |
|---|---|---|
| 59. | Demonstrate an ability to analyze and summarize numerical data. | 1 2 3 4 5 |
| 60. | Interpret common measures of central tendency: mean, median, mode. | 1 2 3 4 5 |
| 61. | Interpret common measures of dispersion: range, variance, standard deviation. | 1 2 3 4 5 |
| 62. | Select a sequence of operations that could be used to solve a problem. | 1 2 3 4 5 |
| 63. | Recognize the relationships among the variables and/or constants in an equation or formula (e.g., If A = bh/2, then h = 2A/b). | 1 2 3 4 5 |
| 64. | Solve simple equations. | 1 2 3 4 5 |
| 65. | Write equations using variables to represent situations presented in words. | 1 2 3 4 5 |
| 66. | Recognize patterns and spatial relationships through observations of geometric figures (e.g., seeing the right triangles in a cube). | 1 2 3 4 5 |
| 67. | Use formulas for determining length, area, and volume of common two- and three-dimensional geometric figures. | 1 2 3 4 5 |
| 68. | Understand and use various systems of measurement, including the metric and U.S. customary systems; make conversions within the same system. | 1 2 3 4 5 |
| 69. | Convert units from one measurement system to another using a conversion table. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

| III. MATHEMATICS (continued) | IMPORTANCE |
|---|---|
| 70. Interpret sentences containing logical connectives (and, or, if-then) and quantifiers (some, all, none). | 1 2 3 4 5 |
| 71. Use deductive/inductive reasoning to determine whether a conclusion based on a sequence of statements is valid or invalid. | 1 2 3 4 5 |
| 72. Draw correct conclusions; identify counterexamples to inappropriate conclusions. | 1 2 3 4 5 |
| 73. Recognize and demonstrate various ways to find answers to problems. | 1 2 3 4 5 |
| 74. Demonstrate fundamental algorithms (procedures) using real world situations (e.g., multiplication as repeated addition). | 1 2 3 4 5 |
| 75. Use examples from the history of mathematics (e.g., the evolution of 19th century computing machines into the high-speed computers of today). | 1 2 3 4 5 |
| 76. Express the key concepts of mathematics in a simple, straightforward manner. | 1 2 3 4 5 |
| 77. Use a calculator as a computational tool. | 1 2 3 4 5 |
| 78. Use a variety of materials to foster mathematical understanding (e.g., manipulatives, three-dimensional models, etc.) | 1 2 3 4 5 |
| **IV. LISTENING** | |
| 79. Recall the actual wording of a brief spoken message. | 1 2 3 4 5 |
| 80. Recall and paraphrase a spoken message. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

| IV. LISTENING (continued) | IMPORTANCE |
|---|---|
| 81. Select the information contained in a spoken message which is relevant to answering a particular question or carrying out a particular task. (e.g., screening out information that is irrelevant to the question or task at hand, focusing on important specific details in a message, etc.) | 1 2 3 4 5 |
| 82. Recognize when a speaker has asked a question, and understand what is being asked. | 1 2 3 4 5 |
| 83. Understand implied content in a message, and recognize the difference between what speakers imply and what they directly affirm. | 1 2 3 4 5 |
| 84. Understand the meaning of figures of speech used in a spoken message (e.g., "my heart was racing," "a liar makes only slippery promises"). | 1 2 3 4 5 |
| 85. Interpret the purpose of a common rhetorical device (e.g., a repetition for emphasis or an analogy for clarification). | 1 2 3 4 5 |
| 86. Recognize the overall organization of a spoken message (e.g., determine whether a speaker is primarily comparing and contrasting, narrating events in chronological sequence, describing a phenomenon, using a logical argument, etc.). | 1 2 3 4 5 |
| 87. Identify the main idea of a message, when the main idea is stated directly. | 1 2 3 4 5 |
| 88. Identify the main idea of a message when it is inferable on the basis of information in the message. | 1 2 3 4 5 |
| 89. Identify a speaker's purpose. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how important is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

| IV. | LISTENING (continued) | IMPORTANCE |
|---|---|---|
| 90. | Recognize strengths or weaknesses in the logic of a speaker's arguments. | 1 2 3 4 5 |
| 91. | Determine whether facts or ideas presented by a speaker as evidence in support of an argument are indeed relevant. | 1 2 3 4 5 |
| 92. | Recognize internal inconsistencies in a spoken message (e.g., when a speaker gives contradictory information or makes statements that do not coincide with what he or she said earlier). | 1 2 3 4 5 |
| 93. | Determine whether statements in a spoken message are presented as facts or opinions. | 1 2 3 4 5 |
| 94. | Identify assumptions on which logical argument in a spoken message is based. | 1 2 3 4 5 |
| 95. | Identify the affective or emotional content of a spoken message. | 1 2 3 4 5 |
| 96. | Focus on a spoken message when interfering or competing stimuli (e.g., noise or other distractions) are present. | 1 2 3 4 5 |
| 97. | Understand oral instructions given by a speaker. | 1 2 3 4 5 |
| 98. | Use cues such as pitch, tone of voice, stress, facial expression, or gesture to help understand the meaning of the spoken message. | 1 2 3 4 5 |
| 99. | Recognize the existence of different regional and social varieties (dialects or subdialects) of spoken English. | 1 2 3 4 5 |
| 100. | Understand different regional and social varieties (dialects or subdialects) of spoken English. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

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| V. | SPEAKING | IMPORTANCE |
|---|---|---|
| 101. | Enunciate words to permit listeners to hear the words clearly. | 1 2 3 4 5 |
| 102. | Speak in a fluent manner (e.g., without excessive pauses or "ums" or "ahs"). | 1 2 3 4 5 |
| 103. | Speak at a rate in order to be understood by the audience. | 1 2 3 4 5 |
| 104. | Speak loudly enough to permit listeners to hear. | 1 2 3 4 5 |
| 105. | Use tone of voice to convey a specific attitude or message. | 1 2 3 4 5 |
| 106. | Place stress appropriately to emphasize important information. | 1 2 3 4 5 |
| 107. | Use eye contact, facial expressions and gesture effectively (e.g., to enhance comprehension of message or to encourage interaction). | 1 2 3 4 5 |
| 108. | Use grammatical structures correctly when speaking. | 1 2 3 4 5 |
| 109. | Adjust the grammatical complexity of the language to the audience. | 1 2 3 4 5 |
| 110. | Demonstrate a basic working vocabulary when speaking. | 1 2 3 4 5 |
| 111. | Recognize when a message has not been understood by the listener or listeners. | 1 2 3 4 5 |
| 112. | Supply a synonym for or explanation of a word that has not been understood. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how important is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

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| V. SPEAKING (continued) | IMPORTANCE |
|---|---|
| 113. Adapt vocabulary and style of language to the situation and the audience, (e.g., use suitably formal or informal language, use language appropriate to the age of the listeners). | 1 2 3 4 5 |
| 114. Adjust to an unexpected change in the speaking situation (e.g., when a student joins a group of teachers). | 1 2 3 4 5 |
| 115. Use the spoken language for a variety of communicative purposes (e.g., to describe, explain, narrate, discuss, ask and respond to questions, request, praise, deny, interact socially, etc.). | 1 2 3 4 5 |
| 116. Speak concisely and to the point. | 1 2 3 4 5 |
| 117. Read aloud with the intonation, inflection and fluency to communicate written material effectively. | 1 2 3 4 5 |

VI. INTERACTIVE COMMUNICATION SKILLS

In addition to the preceding skills, interactive skills are also part of communicating effectively.

| | |
|---|---|
| 118. Get a listener's attention before speaking. | 1 2 3 4 5 |
| 119. Give verbal or non-verbal feedback when listening to another speaker (e.g., indicate comprehension, agreement). | 1 2 3 4 5 |
| 120. Exercise good judgement with regard to turn-taking in oral interaction. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

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| VI. | INTERACTIVE COMMUNICATION SKILLS (continued) | IMPORTANCE |
|---|---|---|
| | 121. "Direct" verbal interaction (e.g., give equal speaking time to the people involved, probe for response, keep the interaction to a certain topic). | 1 2 3 4 5 |
| | 122. Adapt to a variety of communicative situations (e.g., small groups, large groups). | 1 2 3 4 5 |
| | 123. Request clarification of a spoken message when it has not been understood. | 1 2 3 4 5 |
| | 124. Be aware of a listener's non-verbal and verbal cues. | 1 2 3 4 5 |
| | 125. Be aware of one's own non-verbal and verbal cues. | 1 2 3 4 5 |
| | 126. Respond to signs that a listener is not understanding a message by paraphrasing or using examples. | 1 2 3 4 5 |
| | 127. Match a spoken message to the audience's level of interest and knowledge. | 1 2 3 4 5 |
| | 128. Refrain from interruptions that interfere with the speaker's opportunity to present his or her comments or point of view. | 1 2 3 4 5 |
| | 129. Listen to a speaker and summarize the speaker's main ideas. | 1 2 3 4 5 |
| | 130. Listen to two speakers and compare their points of view. | 1 2 3 4 5 |

Regardless of the subject area or grade they teach, how <u>important</u> is it that all entry-level teachers be able to do the following?

Circle your response using the 5-point scale next to each action.

1 Of no importance
2 Of little importance
3 Moderately important
4 Very important
5 Extremely important

---

| VI. | INTERACTIVE COMMUNICATION SKILLS (continued) | IMPORTANCE |
|---|---|---|
| | 131. Listen to someone describe a situation, read a different account of the same event, and explain how the two sources confirm and/or contradict each other. | 1 2 3 4 5 |
| | 132. Obtain information from a variety of sources and synthesize the information. | 1 2 3 4 5 |
| | 133. Listen to a discussion, evaluate the logic of the arguments, and draw one's own conclusions. | 1 2 3 4 5 |
| | 134. Observe an incident, describe the incident, and hypothesize on its probable cause or predict the effect. | 1 2 3 4 5 |

## ENABLING SKILLS

Please use this space to list important enabling skill areas not included in the questionnaire (those included were reading, writing, mathematics, listening, speaking, and interactive communication skills).

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Please use this space to list any specific enabling skills that were not included within each of the six enabling skill areas (e.g., did we leave out any important specific reading skills, mathematics skills, listening skills, etc.)

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## CONTENT COVERAGE

**Please answer the following question by circling the number on the 5-point scale that best represents your judgment.**

**How well do you believe this questionnaire covered the important enabling skills all entry-level teachers should possess?**

1. Reading

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| poorly | somewhat | adequately | well | very well |

2. Writing

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| poorly | somewhat | adequately | well | very well |

3. Mathematics

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| poorly | somewhat | adequately | well | very well |

4. Listening

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| poorly | somewhat | adequately | well | very well |

5. Speaking

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| poorly | somewhat | adequately | well | very well |

6. Interactive Communication Skills

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| poorly | somewhat | adequately | well | very well |

PART II: RECOMMENDATIONS FOR TEST CONTENT EMPHASIS

**Listed below are the six enabling skill areas that may be covered on the successor to the NTE. If the examination contained 100 questions, how many questions should be included for each enabling skill area?**

**Please indicate your response by distributing (in whole numbers) a total of 100 points across the six enabling skill areas listed below.**

| Enabling Skill Area | Number of Questions (out of 100) |
|---|---|
| 1. Reading | ---------- |
| 2. Writing | ---------- |
| 3. Mathematics | ---------- |
| 4. Listening | ---------- |
| 5. Speaking | ---------- |
| 6. Interactive Communication Skills | ---------- |
| TOTAL | 100 |

Demographic Section: Teachers

PART III: DEMOGRAPHIC INFORMATION

Please answer the following questions by circling the number that most closely describes you or your professional activities. Please circle only one response for each question.

135. Which of the following best describes the school district in which you work?

1. Urban
2. Suburban
3. Rural

136. What is your age?

1. Under 25
2. 25 to 34
3. 35 to 44
4. 45 to 54
5. 55 to 64
6. 65 or over

137. How many years, including the current school year, have you been teaching?

1. Less than a year
2. 1 to 2 years
3. 3 to 5 years
4. 6 to 10 years
5. 11 to 15 years
6. 16 to 20 years
7. 21 or more years

138. What is your sex?

1. Female
2. Male

139. Is your ethnic heritage Hispanic?

1. Yes
2. No

140. Which of the following best describes you?

1. Black
2. White
3. Asian or Pacific Islander
4. American Indian or Alaska Native
5. Other _____

141. What is the highest professional degree you hold?

1. Less than Bachelor's Degree
2. Bachelor's Degree
3. Bachelor's Degree + Additional Credits
4. Master's Degree or Equivalent
5. Master's Degree + Additional Credits
6. Doctorate

142. Which of the following best describes your current employment status?

1. Regular Teacher (not a substitute)
2. Temporary Substitute (assigned on a daily basis)
3. Permanent Substitute (assigned on a longer term basis)
4. Other (please specify)_____

143. Which of the following best describes the grade level at which you teach?

1. Elementary
2. Middle
3. Secondary

144. Which of the following areas best describes your primary teaching assignment? (Circle only ONE category).

1. All or most school subjects
2. Special education for handicapped or other exceptional students including the gifted and talented
3. Arts (e.g., fine arts, music, theater)
4. Language Arts and Communication (e.g., English, foreign language, speech, literature)
5. Mathematics and Computer Science (e.g., arithmetic, logic, statistics)
6. Physical and Biological Sciences (e.g., general science, biology, physics, chemistry, geology)
7. Social Sciences (e.g., social studies, psychology, sociology, economics, history, government)
8. Home Economics
9. Business and Vocational education (e.g., accounting, shop, craft skills, agriculture)
10. Health and physical education
11. Other (please specify)_____

145. Which of the following ranges best represents the average (typical) class size you teach?

1. 1 to 9 students
2. 10 to 14 students
3. 15 to 19 students
4. 20 to 24 students
5. 25 to 29 students
6. 30 to 34 students
7. 35 or more students

146. In which state do you work?

1. Alabama
2. Alaska
3. Arizona
4. Arkansas
5. California
6. Colorado
7. Connecticut
8. Delaware
9. District of Columbia
10. Florida
11. Georgia
12. Hawaii
13. Idaho
14. Illinois
15. Indiana
16. Iowa
17. Kansas
18. Kentucky
19. Louisiana
20. Maine
21. Maryland
22. Massachusetts
23. Michigan
24. Minnesota
25. Mississippi
26. Missouri
27. Montana
28. Nebraska
29. Nevada
30. New Hampshire
31. New Jersey
32. New Mexico
33. New York
34. North Carolina
35. North Dakota
36. Ohio
37. Oklahoma
38. Oregon
39. Pennsylvania
40. Rhode Island
41. South Carolina
42. South Dakota
43. Tennessee
44. Texas
45. Utah
46. Vermont
47. Virginia
48. Washington
49. West Virginia
50. Wisconsin
51. Wyoming

Thank you for completing this questionnaire.
Please return it <u>WITHIN 10 DAYS</u>
in the enclosed postage-paid envelope.

Demographic Section: Constituencies

PART III: DEMOGRAPHIC INFORMATION

Please answer the following questions by circling the number that most appropriately describes you and your professional activities. Please circle only one response for each question.

1. What is your primary affiliation within the field of education?

   1. State department of education official (NASDTEC)
   2. Teacher educator (e.g., dean, associate dean, professor)
   3. Elementary school principal
   4. Secondary school principal
   5. Superintendent
   6. PTA representative
   7. State board of education representative
   8. State school board representative
   9. AFT representative
   10. NEA representative

2. How many years, including the current year, have you been in your current professional position?

   1. Less than a year
   2. 1 to 3 years
   3. 4 to 6 years
   4. 7 to 9 years
   5. 10 or more years

3. What is your sex?

   1. Female
   2. Male

DEMOGRAPHIC INFORMATION (continued)

4. Is your ethnic heritage Hispanic?

   1. Yes
   2. No

5. Which of the following best describes your racial background?

   1. Black
   2. White
   3. Asian or Pacific Islander
   4. American Indian or Alaksan Native
   5. Other

6. What is your age?

   1. Under 25
   2. 25 to 30
   3. 31 to 36
   4. 37 to 42
   5. 43 to 48
   6. 49 to 54
   7. 55 or over

7. What is the highest academic degree you hold?

   1. Less than Bachelor's Degree
   2. Bachelor's Degree
   3. Master's Degree
   4. Doctorate

DEMOGRAPHIC INFORMATION (continued)

8. Please circle the state in which your work.

| | | |
|---|---|---|
| Alabama | Kentucky | North Dakota |
| Alaska | Louisiana | Ohio |
| Arizona | Maine | Oklahoma |
| Arkansas | Maryland | Oregon |
| California | Massachusetts | Pennsylvania |
| Colorado | Michigan | Rhode Island |
| Connecticut | Minnesota | South Carolina |
| Delaware | Mississippi | South Dakota |
| D. C. | Missouri | Tennessee |
| Florida | Montana | Texas |
| Georgia | Nebraska | Utah |
| Hawaii | Nevada | Vermont |
| Idaho | New Hampshire | Virginia |
| Illinois | New Jersey | Washington |
| Indiana | New Mexico | West Virginia |
| Iowa | New York | Wisconsin |
| Kansas | North Carolina | Wyoming |

Thank you for completing this questionnaire.
Please return it in the enclosed postage-paid envelope.

Appendix E

Sample Letters of Invitation to Participate

in the Job Analysis Survey

- Constituent Group
- Primary Teacher Group
- Supplementary Teacher Group

Constituent Group

AMERICAN ASSOCIATION
OF SCHOOL ADMINISTRATORS

May 23, 1989

Dear Colleague:

We are writing to ask the help of members of the AASA Executive Committee and state association presidents and executive directors.

The Educational Testing Service (ETS) is now developing a new generation of examinations that will assess the "enabling skills" that all beginning teachers should reasonably be expected to possess: reading, writing, mathematics, listening, and speaking. ETS has asked our help in contributing to the design of this examination.

As part of the process of identifying "enabling skills," ETS has worked closely with teachers, school administrators at the state and local levels, teachers trainers, and parents. The enclosed questionnaire has been developed as a way to obtain judgments on the importance of these skills from key organizations and individuals. The data ETS obtains from you and others will be used to ultimately identify the skills judged to be most important by administrators, and that data will be reflected in the actual exam.

We urge you to take the time to complete the enclosed questionnaire. A preliminary study has indicated that the survey requires about 30 minutes to complete.

Please return your completed questionnaire within 10 days in the enclosed postate-paid envelope.

Many thanks for your cooperation and participation in this most important project.

Sincerely,

Richard D. Miller

Richard Miller
Executive Director



E3

(703) 528-0700 • Fax (703) 841-1543
1801 North Moore Street • Arlington, Virginia 22209
An Equal Opportunity Employer

Primary Teacher Group

EDUCATIONAL TESTING SERVICE PRINCETON, N.J. 08541

Gregory R. Anrig
President

October 6, 1989

Dear Teacher:

We need your help with an important study of teaching being conducted by Educational Testing Service (ETS). As you are undoubtedly aware, the profession is receiving increasing national press as new plans and programs are proposed for assessing teaching. The purpose of this study is to describe and define the enabling skills (e.g., reading skills, mathematics skills, writing skills) that all entry-level teachers should possess. We expect the results of the study to receive a great deal of attention among the various constituencies and interest groups in education.

You were chosen to participate in this study as a member of a carefully selected sample of teachers. The sample is intended to be broadly representative of teachers throughout the United States. The value of a survey like this one is directly related to the number of individuals who return their questionnaires. Because you represent a larger number of teachers with characteristics similar to your own, your responses are very important to us.

The enclosed questionnaire asks you to react to a description of enabling skills and to express your views about the importance of each for entry-level teachers.

The information you provide will ultimately be used to guide the development of a successor to the National Teacher Examinations, an activity that ETS is undertaking in response to concerns expressed by the teaching community and to reflect new developments in the area of teacher assessment. At the same time, the study represents an important contribution in its own right to our understanding of teaching as a profession. This is one of the most systematic studies ever undertaken of teaching, and we expect the results to be widely disseminated.

Your responses will be treated as confidential. You will notice that we ask for some background information about you; this is solely for purposes of describing the sample of teachers. If you provide your name, we will send you a letter that thanks you for your participation in the study; the letter can be added to your personnel file or given to your supervisor. Under no circumstances will your name appear in connection with your responses, which will be reported only in the form of group summaries.

A postage-paid envelope is enclosed for the return of your completed questionnaire. Please return the questionnaire within ten days. If you have any questions about the study or about your participation in it, feel free to call Dr. Richard Tannenbaum, collect, at 609-921-9000 Ext. 5279.

Thank you for your cooperation in what we feel is an exciting and important venture.

Sincerely,

Gregory R. Anrig

Gregory R. Anrig

Enclosure

---

If you would like a letter that acknowledges your participation in this study, please provide your name and preferred address (if different from mailing label) below.

Name: _____

Address: _____

_____

_____

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Supplementary Teacher Group

NATIONAL EDUCATION ASSOCIATION • 1201 16th St., N.W., Washington, D C 20036-3290 • (202) 822-7000

EXECUTIVE OFFICE

KEITH GEIGER, President
ROBERT CHASE, Vice President
ROXANNE E. BRADSHAW, Secretary-Treasurer

DON CAMERON, Executive Director

January, 1990

MEMORANDUM

TO: Selected NEA Members

FROM: Keith Geiger

RE: Assistance with ETS Survey

I am writing to ask your assistance with an important project underway at the Educational Testing Service (ETS).

As part of its redesign of the National Teacher Examination (NTE), ETS is conducting a nationwide survey of classroom teachers seeking their responses to questions on enabling skills for teachers.

The survey is an important element of the job analysis phase of the NTE redesign. Teachers from elementary, middle, and secondary schools will identify the enabling skills necessary for beginning teachers, and therefore, will help shape the content of future NTE questions. As such, ETS is concerned that the respondent pool be adequately representative of ethnic minorities and has asked the NEA's assistance in ensuring this representation.

The NEA is supportive of ETS' effort to improve the National Teachers Examination and believes that teacher input to the design of the NTE successor is essential. We also agree with ETS that the successor to the NTE must be sensitive to the opinions and priorities of as broad a range of teachers as possible. Therefore, I ask that you complete the enclosed survey form and return it to ETS in the enclosed envelope.

ETS policy is to treat all survey responses as confidential. Inquiries about this project can be directed to Patricia Bukatko of ETS at (609) 734-5193 or to NEA-IPD at (202) 822-7350.

Thank you for your cooperation.

Appendix F

Constituent Respondents: Results

of Frequency and Mean Analyses

| | CONSTITUENT RESPONDENTS N=289 | | | |
|---|---|---|---|---|
| | PERCENT | | | |
| | L/N[a] | V/E[b] | Mean | S.D. |
| **I. READING** | | | | |
| 1. Determine main idea | 1 | 99 | 4.85 | 0.45 |
| 2. Locate important ideas | 1 | 98 | 4.73 | 0.57 |
| 3. Identify accurate paraphrases | 1 | 85 | 4.35 | 0.78 |
| 4. Determine supporting ideas | 1 | 89 | 4.42 | 0.72 |
| 5. Recognize an argument | 1 | 93 | 4.51 | 0.64 |
| 6. Determine facts/ideas | 1 | 94 | 4.51 | 0.63 |
| 7. Identify strength/weakness | 2 | 81 | 4.19 | 0.79 |
| 8. Recognize techniques | 5 | 66 | 3.89 | 0.89 |
| 9. Recognize elements | 2 | 81 | 4.19 | 0.79 |
| 10. Identify logical assumptions | 2 | 80 | 4.17 | 0.78 |
| 11. Recognize point of view | 1 | 81 | 4.25 | 0.78 |
| 12. Perceive what is implied | 2 | 84 | 4.20 | 0.77 |
| 13. Recognize attitude expressed | 2 | 76 | 4.05 | 0.79 |
| 14. Recognize style | 7 | 49 | 3.58 | 0.83 |
| 15. Distinguish facts/opinion | 1 | 94 | 4.56 | 0.66 |
| 16. Recognize ideas/situations | 3 | 67 | 3.89 | 0.80 |
| 17. Determine author's purpose | 5 | 68 | 3.94 | 0.91 |
| 18. Understand reading selections | 3 | 73 | 4.01 | 0.86 |
| 19. Use table of contents | 1 | 94 | 4.69 | 0.59 |
| 20. Arrange ideas in reading selection | 5 | 80 | 4.14 | 0.87 |
| 21. Identify relationships | 2 | 80 | 4.15 | 0.81 |
| 22. Determine implied relationships | 3 | 78 | 4.06 | 0.79 |
| 23. Locate place in reading selection | 9 | 69 | 3.96 | 1.02 |
| 24. Recognize different interpretations | 1 | 80 | 4.20 | 0.77 |
| 25. Identify what author assumes | 6 | 60 | 3.76 | 0.87 |

[a]L/N = of little or no importance
[b]V/E = very or extremely important
* L/N > 20%
† Mean of less than 3.50

| | CONSTITUENT RESPONDENTS | | | |
|---|---|---|---|---|
| | PERCENT | | | |
| | L/N | V/E | Mean | S.D. |
| I. READING (cont'd) | | | | |
| 26. Recognize meaning of word | 1 | 90 | 4.41 | 0.73 |
| 27. Determine meaning of figuration | 3 | 74 | 4.00 | 0.83 |
| 28. Understand function-key transit. | 3 | 74 | 4.05 | 0.84 |
| 29. Compare/combine ideas | 1 | 86 | 4.28 | 0.74 |
| 30. Identify inconsistencies | 2 | 88 | 4.31 | 0.74 |
| 31. Specify appropriate reference source | 1 | 92 | 4.48 | 0.70 |
| 32. Understand reading materials | 2 | 80 | 4.16 | 0.79 |
| II. WRITING | | | | |
| 33. Describe an event/situation | 1 | 96 | 4.58 | 0.61 |
| 34. Delineate steps in a process | 1 | 97 | 4.72 | 0.54 |
| 35. Support a position | 1 | 93 | 4.44 | 0.65 |
| 36. Analyze ideas | 1 | 91 | 4.46 | 0.70 |
| 37. Provide a clear focus | 1 | 97 | 4.65 | 0.58 |
| 38. Produce/develop supp. materials | 0 | 91 | 4.36 | 0.67 |
| 39. Organize ideas | 1 | 97 | 4.69 | 0.61 |
| 40. Use vocabulary appropriatly | 1 | 96 | 4.65 | 0.61 |
| 41. Present ideas in writing | 2 | 63 | 3.83 | 0.81 |
| 42. Present alternative points | 2 | 76 | 4.05 | 0.78 |
| 43. Produce writing free of errors | 1 | 93 | 4.66 | 0.66 |
| 44. Recognize basic grammatical errors | 1 | 96 | 4.79 | 0.55 |
| 45. Recognize effective sentence structure | 1 | 93 | 4.52 | 0.66 |
| 46. Recognize inappropriate language | 1 | 84 | 4.23 | 0.75 |
| 47. Revise sentences | 1 | 96 | 4.68 | 0.62 |
| 48. Revise paragraphs to create | 1 | 89 | 4.33 | 0.68 |
| 49. Revise paragraphs to clarify | 0 | 91 | 4.37 | 0.65 |



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| | CONSTITUENT RESPONDENTS | | | |
|---|---|---|---|---|
| | PERCENT | | | |
| | L/N | V/E | Mean | S.D. |
| **III. MATHEMATICS** | | | | |
| 50. Recognize position of numbers | 1 | 92 | 4.51 | 0.68 |
| 51. Recognize equivalent forms | 2 | 88 | 4.40 | 0.74 |
| 52. Solve problems | 1 | 84 | 4.27 | 0.75 |
| 53. Use appropriate form of number | 2 | 82 | 4.16 | 0.77 |
| 54. Demonstrate charact. of counting #'s | 3 | 78 | 4.11 | 0.85 |
| 55. Interpret and apply ratio | 2 | 87 | 4.24 | 0.72 |
| 56. Perform computations | 1 | 97 | 4.70 | 0.58 |
| 57. Read/Interpret various graphs | 1 | 91 | 4.44 | 0.70 |
| 58. Recognize numerical data | 1 | 83 | 4.18 | 0.75 |
| 59. Demonstrate ability to analyze | 1 | 80 | 4.13 | 0.75 |
| 60. Interpret Mean, Median, Mode | 2 | 69 | 3.93 | 0.80 |
| 61. Interpret Range, Variance, S.D. | 9 | 50 | 3.58 | 0.88 |
| 62. Select sequence of operations | 2 | 82 | 4.17 | 0.78 |
| † 63. Recognize relationships among variables | 15 | 46 | 3.47 | 0.99 |
| 64. Solve simple equations | 4 | 79 | 4.19 | 0.89 |
| 65. Write equations using variables | 10 | 55 | 3.63 | 0.96 |
| 66. Recognize patterns | 11 | 50 | 3.57 | 0.94 |
| 67. Use formulas for determining length | 8 | 58 | 3.73 | 0.92 |
| 68. Use various systems of measurement | 8 | 60 | 3.81 | 0.96 |
| 69. Convert units - measurement system | 7 | 64 | 3.83 | 0.91 |
| 70. Interpret logical connectives | 3 | 69 | 3.97 | 0.85 |
| 71. Use deductive/inductive reasoning | 4 | 78 | 4.10 | 0.84 |
| 72. Draw correct conclusions | 5 | 72 | 3.99 | 0.87 |
| 73. Demonstrate ways to find answers | 3 | 84 | 4.23 | 0.84 |
| 74. Demonstrate fundamental algorithms | 9 | 64 | 3.83 | 0.95 |
| †* 75. Use examples from history of math | 34 | 22 | 2.90 | 0.97 |

| | CONSTITUENT RESPONDENTS | | | |
|---|---|---|---|---|
| | PERCENT | | | |
| | L/N | V/E | Mean | S.D. |
| III. MATHEMATICS (cont'd) | | | | |
| 76. Express key concept of math | 3 | 78 | 4.22 | 0.89 |
| 77. Use calculator as tool | 3 | 83 | 4.30 | 0.82 |
| 78. Use a variety of materials | 10 | 66 | 3.92 | 1.03 |
| VI. LISTENING | | | | |
| 79. Recall actual wording of message | 14 | 61 | 3.73 | 1.05 |
| 80. Recall & paraphrase spoken message | 1 | 94 | 4.50 | 0.68 |
| 81. Select info. in a spoken message | 1 | 93 | 4.48 | 0.69 |
| 82. Recognize a speaker's question | 1 | 97 | 4.64 | 0.61 |
| 83. Understand implied cont. in message | 1 | 87 | 4.28 | 0.72 |
| 84. Understand meaning of fig. of speech | 4 | 75 | 4.03 | 0.82 |
| 85. Interpret purp. of rhetorical device | 6 | 65 | 3.80 | 0.85 |
| 86. Recognize organiz.-spoken message | 4 | 67 | 3.90 | 0.86 |
| 87. Ident. main idea of message-directly | 1 | 97 | 4.71 | 0.57 |
| 88. Ident. main idea of mess-inferable | 1 | 92 | 4.43 | 0.69 |
| 89. Identify a speaker's purpose | 2 | 91 | 4.45 | 0.72 |
| 90. Recognize strength/weakness in logic | 1 | 86 | 4.20 | 0.69 |
| 91. Determine facts presented are relev. | 1 | 86 | 4.26 | 0.74 |
| 92. Determine statements are fact/opinion | 2 | 88 | 4.28 | 0.71 |
| 93. Identify basis of logical argument | 1 | 90 | 4.44 | 0.68 |
| 94. Identify assumption of log. argument | 1 | 78 | 4.04 | 0.72 |
| 95. Identify affective/emotional content | 3 | 73 | 3.96 | 0.78 |
| 96. Focus on a spoken message | 6 | 72 | 3.97 | 0.93 |
| 97. Understand oral instructions given | 1 | 96 | 4.66 | 0.60 |
| 98. Use cues such as pitch | 2 | 79 | 4.15 | 0.81 |
| 99. Recognize dialects of spoken English | 8 | 60 | 3.81 | 1.00 |
| 100. Understand spoken English dialects | 12 | 53 | 3.58 | 0.98 |

| | CONSTITUENT RESPONDENTS | | | |
|---|---|---|---|---|
| | PERCENT | | | |
| | L/N | V/E | Mean | S.D. |
| **V. SPEAKING** | | | | |
| 101. Enunciate words | 1 | 95 | 4.65 | 0.66 |
| 102. Speak in a fluent manner | 1 | 91 | 4.46 | 0.72 |
| 103. Speak at rate to be understood | 1 | 95 | 4.56 | 0.63 |
| 104. Speak loudly to be heard | 1 | 94 | 4.62 | 0.63 |
| 105. Use tone of voice to convey message | 1 | 87 | 4.28 | 0.73 |
| 106. Place stress appropriately | 1 | 89 | 4.32 | 0.71 |
| 107. Use eye contact | 1 | 88 | 4.42 | 0.74 |
| 108. Use grammatical structure correctly | 1 | 96 | 4.67 | 0.61 |
| 109. Adjust grammatical complexity | 2 | 89 | 4.41 | 0.75 |
| 110. Demonstrate basic working vocabulary | 1 | 94 | 4.56 | 0.65 |
| 111. Recognize message not understood | 1 | 98 | 4.68 | 0.58 |
| 112. Supply synonym for a word | 1 | 92 | 4.44 | 0.68 |
| 113. Adapt vocabulary and style of lang. | 1 | 91 | 4.45 | 0.72 |
| 114. Adjust to unexpected change | 4 | 82 | 4.12 | 0.82 |
| 115. Use spoken lang. for variety of purp. | 1 | 94 | 4.50 | 0.65 |
| 116. Speak concisely and to the point | 1 | 93 | 4.46 | 0.67 |
| 117. Read aloud with intonation | 3 | 87 | 4.30 | 0.79 |
| **VI. INTERACTIVE COMMUNICATION SKILLS** | | | | |
| 118. Get a listener's attention | 2 | 92 | 4.55 | 0.75 |
| 119. Give verbal/non-verbal feedback | 2 | 82 | 4.22 | 0.80 |
| 120. Exercise gd. judgment-oral interaction | 1 | 87 | 4.29 | 0.75 |
| 121. Direct verbal interaction | 2 | 86 | 4.22 | 0.75 |
| 122. Adapt to a variety of comm. situations | 1 | 86 | 4.30 | 0.75 |
| 123. Request clarification of spoken mess. | 1 | 87 | 4.34 | 0.75 |
| 124. Be aware of listener's non-verbal cues | 1 | 85 | 4.24 | 0.74 |
| 125. Be aware of one own non-verbal cues | 1 | 87 | 4.31 | 0.74 |

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| | CONSTITUENT RESPONDENTS | | | |
|---|---|---|---|---|
| | PERCENT | | | |
| | L/N | V/E | Mean | S.D. |
| **VI. INTERACTIVE COMMUNICATION SKILLS (cont'd)** | | | | |
| 126. Respond to listener's signs | 1 | 94 | 4.48 | 0.64 |
| 127. Match spoken mess. to audience level | 1 | 88 | 4.40 | 0.73 |
| 128. Refrain from interruptions | 2 | 85 | 4.30 | 0.81 |
| 129. Listen to speaker and summarize ideas | 1 | 93 | 4.40 | 0.64 |
| 130. Listen to two speakers and compare | 1 | 84 | 4.16 | 0.70 |
| 131. Listen to someone describe situation | 2 | 69 | 3.93 | 0.81 |
| 132. Obtain information from diff. resources | 1 | 87 | 4.30 | 0.70 |
| 133. Listen to a disc. and evaluate logic | 1 | 90 | 4.41 | 0.68 |
| 134. Observe/describe an incident | 1 | 82 | 4.12 | 0.74 |

Appendix G

Primary Teacher Respondents: Demographic Characteristics

| | Number | Percent |
|---|---|---|
| **School Setting** | | |
| Urban | 622 | 28.0 |
| Suburban | 783 | 35.2 |
| Rural | 820 | 36.9 |
| No Response | 38 | |
| Total | 2225 | |
| **Age** | | |
| Under 25 | 25 | 1.1 |
| 25-34 | 337 | 15.0 |
| 35-44 | 954 | 42.5 |
| 45-54 | 686 | 30.5 |
| 55-64 | 233 | 10.4 |
| 65 and over | 12 | 0.5 |
| No response | 22 | |
| Total | 2247 | |
| **Years Teaching** | | |
| Less than 1 | 1 | 0.3 |
| 1 - 2 | 38 | 1.7 |
| 3 - 5 | 139 | 6.2 |
| 6 - 10 | 314 | 14.0 |
| 11 - 15 | 470 | 20.9 |
| 16 - 20 | 547 | 24.4 |
| 21 or more | 731 | 32.5 |
| No response | 23 | |
| Total | 2246 | |
| **Sex** | | |
| Female | 1457 | 64.8 |
| Male | 791 | 35.2 |
| No response | 21 | |
| Total | 2248 | |

| | Number | Percent |
|---|---|---|
| **Hispanic Heritage** | | |
| Yes | 42 | 1.9 |
| No | 2194 | 98.1 |
| No response | 32 | |
| Total | 2236 | |
| **Race** | | |
| Black | 137 | 6.2 |
| White (non-Hispanic) | 1978 | 89.7 |
| Asian or Pacific Islander | 47 | 2.1 |
| American Indian or Alaska Native | 9 | 0.4 |
| Other | 35 | 1.6 |
| No Response | 30 | |
| Total | 2206 | |
| **Highest Degree** | | |
| Less than a Bachelor's | 4 | 0.2 |
| Bachelor's | 79 | 3.5 |
| Bachelor's + additional credits | 770 | 34.4 |
| Master's or equivalent | 344 | 15.4 |
| Master's + additional credits | 1006 | 45.0 |
| Doctorate | 33 | 1.5 |
| No Response | 27 | |
| Total | 2236 | |
| **Employment Status** | | |
| Regular Teacher | 2138 | 96.3 |
| Temporary Substitute | 5 | 0.2 |
| Permanent Substitute | 15 | 0.7 |
| Other | 63 | 2.8 |
| No response | 43 | |
| Total | 2221 | |

| | Number | Percent |
|---|---|---|
| Grade Level | | |
| Elementary | 647 | 29.4 |
| Middle | 653 | 29.7 |
| Secondary | 897 | 40.8 |
| No response | 33 | |
| Total | 2197 | |
| Teaching Assignment | | |
| All or Most School Subjects | 513 | 23.5 |
| Special Education | 185 | 8.5 |
| Arts | 117 | 5.4 |
| Language Arts and Communication | 364 | 16.7 |
| Mathematics and Computer Science | 263 | 12.0 |
| Physical and Biological Sciences | 194 | 8.9 |
| Social Science | 225 | 10.3 |
| Home Economics | 32 | 1.5 |
| Business and Vocational Education | 110 | 5.0 |
| Health and Physical Education | 78 | 3.6 |
| Other | 105 | 4.8 |
| No response | 38 | |
| Total | 2186 | |
| Average Class Size | | |
| 1 - 9 | 162 | 7.3 |
| 10 - 14 | 126 | 5.7 |
| 15 - 19 | 239 | 10.8 |
| 20 - 24 | 661 | 29.9 |
| 25 - 29 | 779 | 35.2 |
| 30 - 34 | 192 | 8.7 |
| 35 or greater | 54 | 2.4 |
| No response | 39 | |
| Total | 2213 | |

| State | Number | Percent |
|---|---|---|
| Alabama | 42 | 1.9 |
| Alaska | 40 | 1.8 |
| Arizona | 39 | 1.7 |
| Arkansas | 45 | 2.0 |
| California | 29 | 1.3 |
| Colorado | 56 | 2.5 |
| Connecticut | 49 | 2.2 |
| Delaware | 48 | 2.1 |
| District of Columbia | 31 | 1.4 |
| Florida | 43 | 1.9 |
| Georgia | 58 | 2.6 |
| Hawaii | 47 | 2.1 |
| Idaho | 50 | 2.2 |
| Illinois | 40 | 1.8 |
| Indiana | 62 | 2.8 |
| Iowa | 51 | 2.3 |
| Kansas | 42 | 1.9 |
| Kentucky | 36 | 1.6 |
| Louisiana | 40 | 1.8 |
| Maine | 48 | 2.1 |
| Maryland | 43 | 1.9 |
| Massachusetts | 34 | 1.5 |
| Michigan | 38 | 1.7 |
| Minnesota | 45 | 2.0 |
| Mississippi | 40 | 1.8 |
| Missouri | 33 | 1.5 |
| Montana | 44 | 2.0 |
| Nebraska | 56 | 2.5 |
| Nevada | 40 | 1.8 |

| | Number | Percent |
|---|---|---|
| New Hampshire | 50 | 2.2 |
| New Jersey | 51 | 2.0 |
| New Mexico | 46 | 2.0 |
| New York | 30 | 1.3 |
| North Carolina | 44 | 2.0 |
| North Dakota | 47 | 2.1 |
| Ohio | 38 | 1.7 |
| Oklahoma | 42 | 1.9 |
| Oregon | 44 | 2.0 |
| Pennsylvania | 52 | 2.3 |
| Rhode Island | 41 | 1.8 |
| South Carolina | 44 | 2.0 |
| South Dakota | 47 | 2.1 |
| Tennessee | 41 | 1.8 |
| Texas | 39 | 1.7 |
| Utah | 39 | 1.7 |
| Vermont | 40 | 1.8 |
| Virginia | 46 | 2.0 |
| Washington | 43 | 1.9 |
| West Virginia | 41 | 1.8 |
| Wisconsin | 52 | 2.3 |
| Wyoming | 59 | 2.6 |
| No response | 23 | |
| Total | 2245 | |

Appendix H

Primary Teacher Respondents: Results of

Frequency and Mean Analyses

| | PRIMARY TEACHER RESPONDENTS N=2269 | | | |
|---|---|---|---|---|
| | L/N[a] | V/E[b] | Mean | S.D. |
| L READING | | | | |
| 1. Determine main idea | 0 | 98 | 4.77 | 0.49 |
| 2. Locate important ideas | 1 | 96 | 4.62 | 0.60 |
| 3. Identify accurate paraphrases | 2 | 84 | 4.30 | 0.78 |
| 4. Determine supporting ideas | 1 | 86 | 4.35 | 0.75 |
| 5. Recognize an argument | 2 | 81 | 4.20 | 0.81 |
| 6. Determine facts/ideas | 2 | 84 | 4.25 | 0.78 |
| 7. Identify strength/weakness | 4 | 70 | 3.94 | 0.86 |
| 8. Recognize techniques | 8 | 59 | 3.73 | 0.93 |
| 9. Recognize elements | 3 | 74 | 4.04 | 0.84 |
| 10. Identify logical assumptions | 4 | 71 | 3.93 | 0.84 |
| 11. Recognize point of view | 3 | 76 | 4.06 | 0.83 |
| 12. Perceive what is implied | 3 | 74 | 4.00 | 0.83 |
| 13. Recognize attitude expressed | 5 | 67 | 3.86 | 0.86 |
| † 14. Recognize style | 14 | 42 | 3.37 | 0.92 |
| 15. Distinguish facts/opinion | 2 | 87 | 4.39 | 0.78 |
| 16. Recognize ideas/situations | 6 | 63 | 3.78 | 0.86 |
| 17. Determine author's purpose | 10 | 62 | 3.78 | 0.99 |
| 18. Understand reading selections | 7 | 61 | 3.77 | 0.91 |
| 19. Use table of contents | 1 | 94 | 4.69 | 0.61 |
| 20. Arrange ideas in reading selection | 5 | 72 | 4.02 | 0.90 |
| 21. Identify relationships | 3 | 76 | 4.05 | 0.81 |
| 22. Determine implied relationships | 4 | 73 | 3.97 | 0.83 |
| 23. Locate place in reading selection | 5 | 76 | 4.12 | 0.91 |
| 24. Recognize different interpretations | 3 | 73 | 3.99 | 0.83 |
| 25. Identify what author assumes | 8 | 58 | 3.69 | 0.89 |
| 26. Recognize meaning of word | 2 | 84 | 4.25 | 0.78 |

[a]L/N = of little or no importance
[b]V/E = very or extremely important
* L/N > 20%
† Mean of less than 3.50

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| | PRIMARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| I. READING (cont'd) | | | | |
| 27. Determine meaning of figuration | 5 | 70 | 3.93 | 0.87 |
| 28. Understand function-key transit. | 5 | 69 | 3.93 | 0.88 |
| 29. Compare/combine ideas | 3 | 80 | 4.16 | 0.81 |
| 30. Identify inconsistencies | 4 | 74 | 4.03 | 0.85 |
| 31. Specify appropriate reference source | 2 | 88 | 4.43 | 0.77 |
| 32. Understand reading materials | 5 | 71 | 3.94 | 0.87 |
| II. WRITING | | | | |
| 33. Describe an event/situation | 1 | 91 | 4.45 | 0.67 |
| 34. Delineate steps in a process | 1 | 95 | 4.59 | 0.61 |
| 35. Support a position | 1 | 84 | 4.26 | 0.76 |
| 36. Analyze ideas | 1 | 87 | 4.33 | 0.72 |
| 37. Provide a clear focus | 2 | 86 | 4.33 | 0.76 |
| 38. Produce/develop supp. materials | 2 | 85 | 4.28 | 0.75 |
| 39. Organize ideas | 0 | 95 | 4.61 | 0.59 |
| 40. Use vocabulary appropriatly | 1 | 94 | 4.57 | 0.63 |
| 41. Present ideas in writing | 5 | 61 | 3.78 | 0.87 |
| 42. Present alternative points | 5 | 64 | 3.82 | 0.85 |
| 43. Produce writing free of errors | 1 | 91 | 4.53 | 0.70 |
| 44. Recognize basic grammatical errors | 1 | 94 | 4.68 | 0.62 |
| 45. Recognize effective sentence structure | 2 | 82 | 4.22 | 0.81 |
| 46. Recognize inappropriate language | 2 | 80 | 4.18 | 0.81 |
| 47. Revise sentences | 1 | 93 | 4.56 | 0.68 |
| 48. Revise paragraphs to create | 2 | 83 | 4.22 | 0.77 |
| 49. Revise paragraphs to clarify | 2 | 84 | 4.22 | 0.77 |

| | PRIMARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| **III. MATHEMATICS** | | | | |
| 50. Recognize position of numbers | 2 | 86 | 4.36 | 0.79 |
| 51. Recognize equivalent forms | 3 | 82 | 4.26 | 0.84 |
| 52. Solve problems | 2 | 81 | 4.20 | 0.81 |
| 53. Use appropriate form of number | 2 | 80 | 4.18 | 0.81 |
| 54. Demonstrate charact. of counting #'s | 6 | 71 | 4.00 | 0.94 |
| 55. Interpret and apply ratio | 4 | 73 | 4.01 | 0.87 |
| 56. Perform computations | 1 | 95 | 4.67 | 0.62 |
| 57. Read/Interpret various graphs | 2 | 88 | 4.40 | 0.76 |
| 58. Recognize numerical data | 5 | 69 | 3.92 | 0.89 |
| 59. Demonstrate ability to analyze | 5 | 66 | 3.85 | 0.87 |
| 60. Interpret Mean, Median, Mode | 11 | 51 | 3.56 | 0.95 |
| †* 61. Interpret Range, Variance, S.D. | 21 | 36 | 3.22 | 0.96 |
| 62. Select sequence of operations | 4 | 75 | 4.04 | 0.87 |
| †* 63. Recognize relationships among variables | 25 | 38 | 3.20 | 1.07 |
| 64. Solve simple equations | 6 | 75 | 4.14 | 0.98 |
| 65. Write equations using variables | 16 | 51 | 3.51 | 1.05 |
| † 66. Recognize patterns | 19 | 44 | 3.36 | 1.04 |
| 67. Use formulas for determining length | 17 | 52 | 3.52 | 1.07 |
| 68. Use various systems of measurement | 13 | 56 | 3.64 | 1.04 |
| 69. Convert units - measurement system | 15 | 54 | 3.57 | 1.06 |
| 70. Interpret logical connectives | 11 | 57 | 3.67 | 0.98 |
| 71. Use deductive/inductive reasoning | 9 | 61 | 3.75 | 0.96 |
| 72. Draw correct conclusions | 13 | 56 | 3.62 | 1.01 |
| 73. Demonstrate ways to find answers | 8 | 73 | 3.98 | 0.90 |
| 74. Demonstrate fundamental algorithms | 14 | 58 | 3.66 | 1.07 |
| †* 75. Use examples from history of math | 42 | 21 | 2.72 | 1.04 |

| | PRIMARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| **III. MATHEMATICS (cont'd)** | | | | |
| 76. Express key concept of math | 8 | 74 | 4.08 | 1.00 |
| 77. Use calculator as tool | 6 | 74 | 4.09 | 0.96 |
| 78. Use a variety of materials | 14 | 61 | 3.76 | 1.14 |
| **VI. LISTENING** | | | | |
| 79. Recall actual wording of message | 15 | 54 | 3.62 | 1.08 |
| 80. Recall & paraphrase spoken message | 2 | 88 | 4.35 | 0.75 |
| 81. Select info. in a spoken message | 1 | 87 | 4.29 | 0.74 |
| 82. Recognize a speaker's question | 1 | 95 | 4.59 | 0.62 |
| 83. Understand implied cont. in message | 2 | 81 | 4.13 | 0.76 |
| 84. Understand meaning of fig. of speech | 4 | 72 | 3.96 | 0.85 |
| 85. Interpret purp. of rhetorical device | 8 | 59 | 3.70 | 0.89 |
| 86. Recognize organiz.-spoken message | 8 | 62 | 3.76 | 0.91 |
| 87. Ident. main idea of message-directly | 1 | 94 | 4.63 | 0.62 |
| 88. Ident. main idea of mess-inferable | 1 | 85 | 4.27 | 0.74 |
| 89. Identify a speaker's purpose | 2 | 85 | 4.31 | 0.76 |
| 90. Recognize strength/weakness in logic | 3 | 73 | 3.95 | 0.80 |
| 91. Determine facts presented are relev. | 2 | 77 | 4.05 | 0.79 |
| 92. Determine statements are fact/opinion | 3 | 79 | 4.12 | 0.80 |
| 93. Identify basis of logical argument | 2 | 88 | 4.37 | 0.74 |
| 94. Identify assumption of log. argument | 5 | 69 | 3.86 | 0.83 |
| 95. Identify affective/emotional content | 6 | 65 | 3.81 | 0.86 |
| 96. Focus on a spoken message | 7 | 70 | 3.91 | 0.91 |
| 97. Understand oral instructions given | 1 | 94 | 4.59 | 0.63 |
| 98. Use cues such as pitch | 3 | 81 | 4.17 | 0.81 |
| 99. Recognize dialects of spoken English | 10 | 59 | 3.72 | 0.97 |
| 100. Understand spoken English dialects | 14 | 48 | 3.47 | 0.96 |



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| | PRIMARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| **V. SPEAKING** | | | | |
| 101. Enunciate words | 1 | 95 | 4.64 | 0.60 |
| 102. Speak in a fluent manner | 1 | 90 | 4.44 | 0.71 |
| 103. Speak at rate to be understood | 0 | 96 | 4.61 | 0.59 |
| 104. Speak loudly to be heard | 1 | 97 | 4.67 | 0.57 |
| 105. Use tone of voice to convey message | 1 | 89 | 4.39 | 0.71 |
| 106. Place stress appropriately | 1 | 91 | 4.42 | 0.69 |
| 107. Use eye contact | 1 | 92 | 4.53 | 0.67 |
| 108. Use grammatical structure correctly | 1 | 94 | 4.59 | 0.64 |
| 109. Adjust grammatical complexity | 2 | 88 | 4.40 | 0.76 |
| 110. Demonstrate basic working vocabulary | 1 | 94 | 4.54 | 0.64 |
| 111. Recognize message not understood | 0 | 96 | 4.64 | 0.59 |
| 112. Supply synonym for a word | 1 | 93 | 4.53 | 0.65 |
| 113. Adapt vocabulary and style of lang. | 1 | 92 | 4.49 | 0.66 |
| 114. Adjust to unexpected change | 2 | 82 | 4.19 | 0.79 |
| 115. Use spoken lang. for variety of purp. | 1 | 92 | 4.49 | 0.67 |
| 116. Speak concisely and to the point | 0 | 94 | 4.53 | 0.63 |
| 117. Read aloud with intonation | 1 | 88 | 4.38 | 0.73 |
| **VI. INTERACTIVE COMMUNICATION SKILLS** | | | | |
| 118. Get a listener's attention | 1 | 94 | 4.57 | 0.63 |
| 119. Give verbal/non-verbal feedback | 2 | 86 | 4.26 | 0.76 |
| 120. Exercise gd. judgment-oral interaction | 1 | 88 | 4.32 | 0.72 |
| 121. Direct verbal interaction | 2 | 83 | 4.19 | 0.76 |
| 122. Adapt to a variety of comm. situations | 1 | 83 | 4.21 | 0.75 |
| 123. Request clarification of spoken mess. | 1 | 91 | 4.41 | 0.69 |
| 124. Be aware of listener's non-verbal cues | 1 | 85 | 4.24 | 0.74 |
| 125. Be aware of one own non-verbal cues | 1 | 87 | 4.31 | 0.73 |

| | PRIMARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| **VI. INTERACTIVE COMMUNICATION SKILLS (cont'd)** | | | | |
| 126. Respond to listener's signs | 1 | 93 | 4.48 | 0.66 |
| 127. Match spoken mess. to audience level | 1 | 91 | 4.41 | 0.69 |
| 128. Refrain from interruptions | 2 | 87 | 4.31 | 0.74 |
| 129. Listen to speaker and summarize ideas | 2 | 86 | 4.27 | 0.74 |
| 130. Listen to two speakers and compare | 4 | 73 | 3.98 | 0.84 |
| 131. Listen to someone describe situation | 6 | 63 | 3.79 | 0.87 |
| 132. Obtain information from diff. resources | 2 | 79 | 4.14 | 0.81 |
| 133. Listen to a disc. and evaluate logic | 2 | 85 | 4.25 | 0.76 |
| 134. Observe/describe an incident | 3 | 74 | 4.00 | 0.83 |

Appendix I

Primary Teacher Respondents: Mean Ratings by Race/Ethnicity

| | | TOTAL N=2269 | | BLACK N=137 | | WHITE N=1978 | | HISPANIC N=42 | |
|---|---|---|---|---|---|---|---|---|---|
| L | READING | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| | 1. Determine main idea | 4.77 | 0.49 | 4.72 | 0.48 | 4.78 | 0.48 | 4.60 | 0.70 |
| | 2. Locate important ideas | 4.62 | 0.60 | 4.66 | 0.53 | 4.63 | 0.59 | 4.38 | 0.70 |
| | 3. Identify accurate paraphrases | 4.30 | 0.78 | 4.36 | 0.72 | 4.31 | 0.77 | 4.02 | 0.81 |
| | 4. Determine supporting ideas | 4.35 | 0.75 | 4.44 | 0.65 | 4.35 | 0.75 | 4.17 | 0.93 |
| | 5. Recognize an argument | 4.20 | 0.81 | 4.13 | 0.88 | 4.21 | 0.80 | 4.07 | 0.84 |
| | 6. Determine facts/ideas | 4.25 | 0.78 | 4.26 | 0.85 | 4.26 | 0.78 | 4.05 | 0.66 |
| | 7. Identify strength/weakness | 3.94 | 0.86 | 3.96 | 0.89 | 3.94 | 0.85 | 3.83 | 0.88 |
| | 8. Recognize techniques | 3.73 | 0.93 | 3.84 | 0.95 | 3.73 | 0.92 | 3.60 | 0.89 |
| | 9. Recognize elements | 4.04 | 0.84 | 3.98 | 0.89 | 4.05 | 0.83 | 3.98 | 0.87 |
| | 10. Identify logical assumptions | 3.93 | 0.84 | 3.82 | 0.96 | 3.94 | 0.83 | 3.88 | 0.83 |
| | 11. Recognize point of view | 4.06 | 0.83 | 4.05 | 0.83 | 4.07 | 0.83 | 4.00 | 0.74 |
| | 12. Perceive what is implied | 4.00 | 0.83 | 3.99 | 0.87 | 4.00 | 0.82 | 4.02 | 0.75 |
| | 13. Recognize attitude expressed | 3.86 | 0.86 | 3.85 | 0.92 | 3.87 | 0.84 | 3.71 | 0.83 |
| † | 14. Recognize style | 3.37 | 0.92 | 3.61 | 0.88 | 3.35 | 0.91 | 3.48 | 1.04 |
| | 15. Distinguish facts/opinion | 4.39 | 0.78 | 4.35 | 0.79 | 4.40 | 0.77 | 4.26 | 0.86 |
| | 16. Recognize ideas/situations | 3.78 | 0.86 | 3.82 | 0.83 | 3.78 | 0.86 | 3.74 | 0.91 |
| | 17. Determine author's purpose | 3.78 | 0.99 | 3.77 | 1.00 | 3.78 | 0.99 | 3.64 | 0.88 |
| | 18. Understand reading selections | 3.77 | 0.91 | 4.00 | 0.88 | 3.75 | 0.91 | 3.78 | 0.85 |
| | 19. Use table of contents | 4.69 | 0.61 | 4.63 | 0.64 | 4.70 | 0.60 | 4.79 | 0.42 |
| | 20. Arrange ideas in reading selection | 4.02 | 0.90 | 4.04 | 0.88 | 4.02 | 0.90 | 4.19 | 0.97 |
| | 21. Identify relationships | 4.05 | 0.81 | 4.21 | 0.76 | 4.04 | 0.81 | 4.12 | 0.83 |
| | 22. Determine implied relationships | 3.97 | 0.83 | 4.01 | 0.83 | 3.97 | 0.82 | 4.10 | 0.79 |
| | 23. Locate place in reading selection | 4.12 | 0.91 | 4.13 | 0.94 | 4.13 | 0.90 | 4.07 | 0.97 |
| | 24. Recognize different interpretations | 3.99 | 0.83 | 4.16 | 0.79 | 3.98 | 0.83 | 3.98 | 0.84 |
| | 25. Identify what author assumes | 3.69 | 0.89 | 3.69 | 1.00 | 3.69 | 0.88 | 3.52 | 0.71 |
| | 26. Recognize meaning of word | 4.25 | 0.78 | 4.30 | 0.82 | 4.25 | 0.78 | 4.07 | 0.84 |
| | 27. Determine meaning of figuration | 3.93 | 0.87 | 4.05 | 0.83 | 3.92 | 0.87 | 4.07 | 0.89 |
| | 28. Understand function-key transit. | 3.93 | 0.88 | 4.07 | 0.82 | 3.91 | 0.88 | 4.12 | 0.77 |

†Mean of less than 3.50 for one or more respondent subgroups

| | TOTAL | | BLACK | | WHITE | | HISPANIC | |
|---|---|---|---|---|---|---|---|---|
| I. READING (cont'd) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 29. Compare/combine ideas | 4.16 | 0.81 | 4.01 | 0.87 | 4.17 | 0.81 | 4.14 | 0.87 |
| 30. Identify inconsistencies | 4.03 | 0.85 | 4.01 | 0.82 | 4.04 | 0.85 | 3.90 | 0.85 |
| 31. Specify appropriate reference source | 4.43 | 0.77 | 4.41 | 0.72 | 4.44 | 0.76 | 4.48 | 0.77 |
| 32. Understand reading materials | 3.94 | 0.87 | 4.03 | 0.77 | 3.94 | 0.87 | 3.74 | 0.83 |
| II. WRITING | | | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.67 | 4.44 | 0.66 | 4.45 | 0.67 | 4.39 | 0.59 |
| 34. Delineate steps in a process | 4.59 | 0.61 | 4.49 | 0.64 | 4.61 | 0.61 | 4.44 | 0.63 |
| 35. Support a position | 4.26 | 0.76 | 4.23 | 0.79 | 4.26 | 0.76 | 4.15 | 0.76 |
| 36. Analyze ideas | 4.33 | 0.72 | 4.38 | 0.69 | 4.33 | 0.72 | 4.17 | 0.74 |
| 37. Provide a clear focus | 4.33 | 0.76 | 4.27 | 0.74 | 4.34 | 0.76 | 4.17 | 0.67 |
| 38. Produce/develop supp. materials | 4.28 | 0.75 | 4.32 | 0.76 | 4.28 | 0.75 | 4.07 | 0.75 |
| 39. Organize ideas | 4.61 | 0.59 | 4.56 | 0.58 | 4.62 | 0.59 | 4.61 | 0.49 |
| 40. Use vocabulary appropriatly | 4.57 | 0.63 | 4.63 | 0.54 | 4.56 | 0.63 | 4.59 | 0.55 |
| 41. Present ideas in writing | 3.78 | 0.87 | 3.96 | 0.82 | 3.76 | 0.88 | 3.90 | 0.70 |
| 42. Present alternative points | 3.82 | 0.85 | 3.93 | 0.75 | 3.81 | 0.86 | 3.85 | 0.73 |
| 43. Produce writing free of errors | 4.53 | 0.70 | 4.61 | 0.62 | 4.53 | 0.70 | 4.57 | 0.59 |
| 44. Recognize basic grammatical errors | 4.66 | 0.62 | 4.71 | 0.54 | 4.66 | 0.62 | 4.79 | 0.47 |
| 45. Recognize effective sentence structure | 4.22 | 0.81 | 4.41 | 0.68 | 4.20 | 0.82 | 4.29 | 0.74 |
| 46. Recognize inappropriate language | 4.18 | 0.81 | 4.34 | 0.85 | 4.18 | 0.80 | 4.31 | 0.68 |
| 47. Revise sentences | 4.56 | 0.68 | 4.61 | 0.62 | 4.56 | 0.68 | 4.64 | 0.53 |
| 48. Revise paragraphs to create | 4.22 | 0.77 | 4.33 | 0.78 | 4.22 | 0.76 | 4.33 | 0.75 |
| 49. Revise paragraphs to clarify | 4.22 | 0.77 | 4.37 | 0.80 | 4.21 | 0.75 | 4.39 | 0.80 |
| III. MATHEMATICS | | | | | | | | |
| 50. Recognize position of numbers | 4.36 | 0.79 | 4.32 | 0.79 | 4.37 | 0.79 | 4.40 | 0.63 |
| 51. Recognize equivalent forms | 4.26 | 0.84 | 4.24 | 0.77 | 4.26 | 0.84 | 4.40 | 0.66 |
| 52. Solve problems | 4.20 | 0.81 | 4.27 | 0.84 | 4.20 | 0.81 | 4.17 | 0.79 |

| III. MATHEMATICS (cont'd) | TOTAL | | BLACK | | WHITE | | HISPANIC | |
|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 53. Use appropriate form of number | 4.18 | 0.81 | 4.37 | 0.76 | 4.17 | 0.81 | 4.17 | 0.88 |
| 54. Demonstrate charact. of counting #'s | 4.00 | 0.94 | 4.26 | 0.86 | 3.97 | 0.94 | 4.31 | 0.87 |
| 55. Interpret and apply ratio | 4.01 | 0.87 | 4.07 | 0.87 | 4.00 | 0.87 | 4.22 | 0.73 |
| 56. Perform computations | 4.67 | 0.62 | 4.75 | 0.49 | 4.66 | 0.63 | 4.74 | 0.50 |
| 57. Read/interpret various graphs | 4.40 | 0.76 | 4.37 | 0.74 | 4.41 | 0.75 | 4.33 | 0.85 |
| 58. Recognize numerical data | 3.92 | 0.89 | 3.89 | 0.93 | 3.91 | 0.89 | 3.95 | 1.03 |
| 59. Demonstrate ability to analyze | 3.85 | 0.87 | 3.93 | 0.91 | 3.84 | 0.87 | 3.86 | 0.90 |
| 60. Interpret Mean, Median, Mode | 3.56 | 0.95 | 3.75 | 0.93 | 3.53 | 0.95 | 3.79 | 0.87 |
| † 61. Interpret Range, Variance, S.D. | 3.22 | 0.96 | 3.47 | 0.93 | 3.19 | 0.96 | 3.44 | 0.90 |
| 62. Select sequence of operations | 4.04 | 0.87 | 4.18 | 0.83 | 4.04 | 0.87 | 4.02 | 0.78 |
| † 63. Recognize relationships among variables | 3.20 | 1.07 | 3.46 | 0.98 | 3.17 | 1.07 | 3.48 | 1.11 |
| 64. Solve simple equations | 4.14 | 0.98 | 4.18 | 0.94 | 4.13 | 0.99 | 4.41 | 0.74 |
| † 65. Write equations using variables | 3.51 | 1.05 | 3.73 | 0.97 | 3.48 | 1.05 | 3.79 | 1.05 |
| † 66. Recognize patterns | 3.36 | 1.04 | 3.58 | 1.05 | 3.33 | 1.04 | 3.50 | 0.99 |
| 67. Use formulas for determining length | 3.52 | 1.07 | 3.69 | 1.08 | 3.50 | 1.06 | 3.57 | 1.06 |
| 68. Use various systems of measurement | 3.64 | 1.04 | 3.73 | 0.94 | 3.63 | 1.05 | 3.67 | 1.00 |
| 69. Convert units - measurement system | 3.57 | 1.06 | 3.67 | 0.98 | 3.54 | 1.06 | 3.95 | 1.03 |
| 70. Interpret logical connectives | 3.67 | 0.98 | 3.77 | 0.90 | 3.66 | 0.98 | 3.86 | 1.00 |
| 71. Use deductive/inductive reasoning | 3.75 | 0.96 | 3.88 | 0.87 | 3.73 | 0.96 | 3.83 | 0.93 |
| 72. Draw correct conclusions | 3.62 | 1.01 | 3.77 | 0.88 | 3.60 | 1.01 | 3.86 | 1.14 |
| 73. Demonstrate ways to find answers | 3.98 | 0.90 | 4.18 | 0.81 | 3.96 | 0.91 | 4.10 | 0.80 |
| 74. Demonstrate fundamental algorithms | 3.66 | 1.07 | 3.99 | 0.95 | 3.62 | 1.08 | 4.02 | 0.84 |
| † 75. Use examples from history of math | 2.72 | 1.04 | 3.19 | 1.06 | 2.67 | 1.02 | 3.12 | 0.94 |
| 76. Express key concept of math | 4.08 | 1.00 | 4.07 | 0.95 | 4.07 | 1.00 | 4.24 | 0.76 |
| 77. Use calculator as tool | 4.09 | 0.96 | 3.93 | 0.97 | 4.12 | 0.95 | 3.67 | 1.18 |
| 78. Use a variety of materials | 3.76 | 1.14 | 4.06 | 1.03 | 3.74 | 1.15 | 3.74 | 1.04 |

| | TOTAL | | BLACK | | WHITE | | HISPANIC | |
|---|---|---|---|---|---|---|---|---|
| **IV. LISTENING** | **Mean** | **S.D.** | **Mean** | **S.D.** | **Mean** | **S.D.** | **Mean** | **S.D.** |
| 79. Recall actual wording of message | 3.62 | 1.08 | 3.85 | 1.00 | 3.60 | 1.08 | 3.57 | 0.97 |
| 80. Recall & paraphrase spoken message | 4.35 | 0.75 | 4.36 | 0.78 | 4.36 | 0.75 | 4.14 | 0.65 |
| 81. Select info. in a spoken message | 4.29 | 0.74 | 4.35 | 0.70 | 4.28 | 0.73 | 4.22 | 0.69 |
| 82. Recognize a speaker's question | 4.59 | 0.62 | 4.61 | 0.61 | 4.59 | 0.62 | 4.67 | 0.48 |
| 83. Understand implied cont. in message | 4.13 | 0.76 | 4.27 | 0.72 | 4.12 | 0.76 | 4.07 | 0.75 |
| 84. Understand meaning of fig. of speech | 3.96 | 0.85 | 4.04 | 0.78 | 3.95 | 0.85 | 4.12 | 0.80 |
| 85. Interpret purp. of rhetorical device | 3.70 | 0.89 | 3.76 | 0.85 | 3.69 | 0.89 | 3.83 | 0.88 |
| 86. Recognize organiz.-spoken message | 3.76 | 0.91 | 3.94 | 0.93 | 3.73 | 0.90 | 3.90 | 0.76 |
| 87. Ident. main idea of message-directly | 4.63 | 0.62 | 4.54 | 0.71 | 4.64 | 0.61 | 4.67 | 0.53 |
| 88. Ident. main idea of mess-inferable | 4.27 | 0.74 | 4.21 | 0.74 | 4.27 | 0.74 | 4.38 | 0.58 |
| 89. Identify a speaker's purpose | 4.31 | 0.76 | 4.36 | 0.75 | 4.31 | 0.76 | 4.36 | 0.76 |
| 90. Recognize strength/weakness in logic | 3.95 | 0.80 | 3.95 | 0.86 | 3.95 | 0.80 | 3.93 | 0.75 |
| 91. Determine facts presented are relev. | 4.05 | 0.79 | 4.15 | 0.82 | 4.04 | 0.79 | 3.88 | 0.78 |
| 92. Determine statements are fact/opinion | 4.12 | 0.80 | 4.22 | 0.80 | 4.11 | 0.80 | 4.02 | 0.79 |
| 93. Identify basis of logical argument | 4.37 | 0.74 | 4.38 | 0.74 | 4.38 | 0.74 | 4.26 | 0.70 |
| 94. Identify assumption of log. argument | 3.86 | 0.83 | 3.96 | 0.83 | 3.85 | 0.83 | 3.80 | 0.81 |
| 95. Identify affective/emotional content | 3.81 | 0.86 | 3.80 | 0.88 | 3.80 | 0.86 | 3.90 | 0.76 |
| 96. Focus on a spoken message | 3.91 | 0.91 | 3.84 | 0.83 | 3.92 | 0.91 | 3.74 | 0.80 |
| 97. Understand oral instructions given | 4.59 | 0.63 | 4.64 | 0.59 | 4.59 | 0.63 | 4.67 | 0.53 |
| 98. Use cues such as pitch | 4.17 | 0.81 | 4.18 | 0.83 | 4.17 | 0.80 | 4.21 | 0.81 |
| 99. Recognize dialects of spoken English | 3.72 | 0.97 | 4.05 | 0.93 | 3.68 | 0.97 | 4.02 | 0.85 |
| † 100. Understand spoken English dialects | 3.47 | 0.96 | 3.88 | 0.88 | 3.43 | 0.96 | 3.71 | 0.86 |
| **V. SPEAKING** | | | | | | | | |
| 101. Enunciate words | 4.64 | 0.60 | 4.68 | 0.54 | 4.65 | 0.60 | 4.67 | 0.53 |
| 102. Speak in a fluent manner | 4.44 | 0.71 | 4.57 | 0.59 | 4.43 | 0.72 | 4.52 | 0.63 |
| 103. Speak at rate to be understood | 4.61 | 0.59 | 4.61 | 0.60 | 4.61 | 0.59 | 4.64 | 0.49 |
| 104. Speak loudly to be heard | 4.67 | 0.57 | 4.68 | 0.54 | 4.67 | 0.57 | 4.67 | 0.48 |
| 105. Use tone of voice to convey message | 4.39 | 0.71 | 4.44 | 0.68 | 4.39 | 0.71 | 4.52 | 0.67 |

| | TOTAL | | BLACK | | WHITE | | HISPANIC | |
|---|---|---|---|---|---|---|---|---|
| V. SPEAKING (cont'd) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 106. Place stress appropriately | 4.42 | 0.69 | 4.41 | 0.67 | 4.42 | 0.69 | 4.04 | 0.66 |
| 107. Use eye contact | 4.53 | 0.67 | 4.46 | 0.67 | 4.53 | 0.67 | 4.50 | 0.80 |
| 108. Use grammatical structure correctly | 4.59 | 0.64 | 4.67 | 0.54 | 4.59 | 0.64 | 4.57 | 0.63 |
| 109. Adjust grammatical complexity | 4.40 | 0.76 | 4.52 | 0.66 | 4.39 | 0.77 | 4.57 | 0.59 |
| 110. Demonstrate basic working vocabulary | 4.54 | 0.64 | 4.56 | 0.63 | 4.54 | 0.64 | 4.69 | 0.47 |
| 111. Recognize message not understood | 4.64 | 0.59 | 4.61 | 0.60 | 4.64 | 0.58 | 4.62 | 0.62 |
| 112. Supply synonym for a word | 4.53 | 0.65 | 4.54 | 0.63 | 4.53 | 0.65 | 4.55 | 0.59 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.66 | 4.55 | 0.58 | 4.48 | 0.67 | 4.60 | 0.54 |
| 114. Adjust to unexpected change | 4.19 | 0.79 | 4.30 | 0.70 | 4.18 | 0.80 | 4.38 | 0.62 |
| 115. Use spoken lang. for variety of purp. | 4.49 | 0.67 | 4.50 | 0.62 | 4.48 | 0.68 | 4.60 | 0.59 |
| 116. Speak concisely and to the point | 4.53 | 0.63 | 4.57 | 0.58 | 4.53 | 0.63 | 4.59 | 0.59 |
| 117. Read aloud with intonation | 4.38 | 0.73 | 4.51 | 0.61 | 4.38 | 0.73 | 4.40 | 0.77 |
| VI. INTERACTIVE COMMUNICATION SKILLS | | | | | | | | |
| 118. Get a listener's attention | 4.57 | 0.63 | 4.57 | 0.60 | 4.58 | 0.63 | 4.56 | 0.67 |
| 119. Give verbal/non-verbal feedback | 4.26 | 0.76 | 4.30 | 0.73 | 4.25 | 0.76 | 4.41 | 0.77 |
| 120. Exercise good judgment-oral interaction | 4.32 | 0.72 | 4.39 | 0.63 | 4.31 | 0.73 | 4.46 | 0.64 |
| 121. Direct verbal interaction | 4.19 | 0.76 | 4.26 | 0.78 | 4.18 | 0.76 | 4.32 | 0.65 |
| 122. Adapt to a variety of comm. situations | 4.21 | 0.75 | 4.30 | 0.68 | 4.20 | 0.76 | 4.44 | 0.55 |
| 123. Request clarification of spoken mess. | 4.41 | 0.69 | 4.49 | 0.68 | 4.40 | 0.70 | 4.49 | 0.60 |
| 124. Be aware of listener's non-verbal cues | 4.24 | 0.74 | 4.36 | 0.65 | 4.23 | 0.74 | 4.32 | 0.69 |
| 125. Be aware of one own non-verbal cues | 4.31 | 0.73 | 4.48 | 0.63 | 4.29 | 0.73 | 4.39 | 0.70 |
| 126. Respond to listener's signs | 4.48 | 0.66 | 4.43 | 0.66 | 4.48 | 0.66 | 4.59 | 0.55 |
| 127. Match spoken mess. to audience level | 4.41 | 0.69 | 4.39 | 0.72 | 4.40 | 0.69 | 4.61 | 0.49 |
| 128. Refrain from interruptions | 4.31 | 0.74 | 4.26 | 0.76 | 4.31 | 0.74 | 4.32 | 0.85 |
| 129. Listen to speaker and summarize ideas | 4.27 | 0.74 | 4.28 | 0.77 | 4.26 | 0.74 | 4.31 | 0.68 |
| 130. Listen to two speakers and compare | 3.98 | 0.84 | 4.07 | 0.87 | 3.96 | 0.83 | 4.00 | 0.77 |
| 131. Listen to someone describe situation | 3.79 | 0.87 | 3.90 | 0.90 | 3.78 | 0.86 | 3.83 | 0.85 |
| 132. Obtain information from diff. resources | 4.14 | 0.81 | 4.13 | 0.90 | 4.14 | 0.80 | 4.36 | 0.73 |
| 133. Listen to a disc. and evaluate logic | 4.25 | 0.76 | 4.26 | 0.75 | 4.25 | 0.76 | 4.34 | 0.73 |
| 134. Observe/describe an incident | 4.00 | 0.83 | 4.05 | 0.82 | 4.00 | -.83 | 4.07 | 0.75 |

Appendix J

Primary Teacher Respondents: Mean Ratings by Sex

| | | TOTAL N=2269 | | FEMALE N=1457 | | MALE N=791 | |
|---|---|---|---|---|---|---|---|
| L | READING | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| | 1. Determine main idea | 4.77 | 0.49 | 4.80 | 0.47 | 4.72 | 0.52 |
| | 2. Locate important ideas | 4.62 | 0.60 | 4.68 | 0.56 | 4.52 | 0.64 |
| | 3. Identify accurate paraphrases | 4.30 | 0.78 | 4.37 | 0.76 | 4.17 | 0.80 |
| | 4. Determine supporting ideas | 4.35 | 0.75 | 4.44 | 0.72 | 4.19 | 0.77 |
| | 5. Recognize an argument | 4.20 | 0.81 | 4.21 | 0.82 | 4.18 | 0.80 |
| | 6. Determine facts/ideas | 4.25 | 0.78 | 4.25 | 0.80 | 4.25 | 0.75 |
| | 7. Identify strength/weakness | 3.94 | 0.86 | 3.94 | 0.87 | 3.93 | 0.85 |
| | 8. Recognize techniques | 3.73 | 0.93 | 3.78 | 0.94 | 3.63 | 0.91 |
| | 9. Recognize elements | 4.04 | 0.84 | 4.09 | 0.84 | 3.94 | 0.83 |
| | 10. Identify logical assumptions | 3.93 | 0.84 | 3.95 | 0.85 | 3.89 | 0.83 |
| | 11. Recognize point of view | 4.06 | 0.83 | 4.07 | 0.84 | 4.05 | 0.80 |
| | 12. Perceive what is implied | 4.00 | 0.83 | 4.09 | 0.83 | 3.83 | 0.81 |
| | 13. Recognize attitude expressed | 3.86 | 0.86 | 3.92 | 0.85 | 3.74 | 0.85 |
| † | 14. Recognize style | 3.37 | 0.92 | 3.47 | 0.91 | 3.18 | 0.90 |
| | 15. Distinguish facts/opinion | 4.39 | 0.78 | 4.41 | 0.78 | 4.34 | 0.80 |
| | 16. Recognize ideas/situations | 3.78 | 0.86 | 3.86 | 0.86 | 3.64 | 0.85 |
| | 17. Determine author's purpose | 3.78 | 0.99 | 3.86 | 0.99 | 3.62 | 0.98 |
| | 18. Understand reading selections | 3.77 | 0.91 | 3.85 | 0.91 | 3.63 | 0.88 |
| | 19. Use table of contents | 4.69 | 0.61 | 4.75 | 0.55 | 4.59 | 0.68 |
| | 20. Arrange ideas in reading selection | 4.02 | 0.90 | 4.11 | 0.89 | 3.86 | 0.90 |
| | 21. Identify relationships | 4.05 | 0.81 | 4.13 | 0.80 | 3.91 | 0.82 |
| | 22. Determine implied relationships | 3.97 | 0.83 | 4.05 | 0.81 | 3.84 | 0.84 |
| | 23. Locate place in reading selection | 4.12 | 0.91 | 4.25 | 0.86 | 3.89 | 0.94 |
| | 24. Recognize different interpretations | 3.99 | 0.83 | 4.07 | 0.82 | 3.86 | 0.82 |
| | 25. Identify what author assumes | 3.69 | 0.89 | 3.80 | 0.89 | 3.50 | 0.84 |
| | 26. Recognize meaning of word | 4.25 | 0.78 | 4.34 | 0.76 | 4.09 | 0.82 |

†Mean of less than 3.50 for one or more respondent subgroups

| | TOTAL | | FEMALE | | MALE | |
|---|---|---|---|---|---|---|
| I. READING (cont'd) | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 27. Determine meaning of figuration | 3.93 | 0.87 | 4.03 | 0.86 | 3.76 | 0.85 |
| 28. Understand function-key transit. | 3.93 | 0.88 | 4.02 | 0.87 | 3.76 | 0.87 |
| 29. Compare/combine ideas | 4.16 | 0.81 | 4.22 | 0.81 | 4.05 | 0.81 |
| 30. Identify inconsistencies | 4.03 | 0.85 | 4.08 | 0.85 | 3.95 | 0.83 |
| 31. Specify appropriate reference source | 4.43 | 0.77 | 4.53 | 0.71 | 4.27 | 0.83 |
| 32. Understand reading materials | 3.94 | 0.87 | 4.07 | 0.84 | 3.71 | 0.87 |
| II. WRITING | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.67 | 4.51 | 0.65 | 4.34 | 0.68 |
| 34. Delineate steps in a process | 4.59 | 0.61 | 4.65 | 0.59 | 4.48 | 0.64 |
| 35. Support a position | 4.26 | 0.76 | 4.31 | 0.75 | 4.16 | 0.76 |
| 36. Analyze ideas | 4.33 | 0.72 | 4.37 | 0.72 | 4.26 | 0.71 |
| 37. Provide a clear focus | 4.33 | 0.76 | 4.39 | 0.75 | 4.22 | 0.77 |
| 38. Produce/develop supp. materials | 4.28 | 0.75 | 4.34 | 0.74 | 4.15 | 0.76 |
| 39. Organize ideas | 4.61 | 0.59 | 4.66 | 0.56 | 4.53 | 0.63 |
| 40. Use vocabulary appropriatly | 4.57 | 0.63 | 4.64 | 0.59 | 4.44 | 0.67 |
| 41. Present ideas in writing | 3.78 | 0.87 | 3.84 | 0.87 | 3.66 | 0.87 |
| 42. Present alternative points | 3.82 | 0.85 | 3.89 | 0.85 | 3.69 | 0.85 |
| 43. Produce writing free of errors | 4.53 | 0.70 | 4.63 | 0.65 | 4.34 | 0.75 |
| 44. Recognize basic grammatical errors | 4.66 | 0.62 | 4.77 | 0.53 | 4.45 | 0.71 |
| 45. Recognize effective sentence structure | 4.22 | 0.81 | 4.29 | 0.81 | 4.08 | 0.81 |
| 46. Recognize inappropriate language | 4.18 | 0.81 | 4.29 | 0.78 | 3.98 | 0.81 |
| 47. Revise sentences | 4.56 | 0.68 | 4.67 | 0.60 | 4.35 | 0.75 |
| 48. Revise paragraphs to create | 4.22 | 0.77 | 4.31 | 0.74 | 4.07 | 0.79 |
| 49. Revise paragraphs to clarify | 4.22 | 0.77 | 4.29 | 0.76 | 4.09 | 0.78 |

| III. MATHEMATICS | TOTAL | | FEMALE | | MALE | |
|---|---|---|---|---|---|---|
| | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 50. Recognize position of numbers | 4.36 | 0.79 | 4.41 | 0.77 | 4.28 | 0.82 |
| 51. Recognize equivalent forms | 4.26 | 0.84 | 4.30 | 0.82 | 4.19 | 0.85 |
| 52. Solve problems | 4.20 | 0.81 | 4.28 | 0.78 | 4.06 | 0.84 |
| 53. Use appropriate form of number | 4.18 | 0.81 | 4.26 | 0.79 | 4.02 | 0.81 |
| 54. Demonstrate char. of counting #'s | 4.00 | 0.94 | 4.09 | 0.94 | 3.84 | 0.91 |
| 55. Interpret and apply ratio | 4.01 | 0.87 | 4.01 | 0.88 | 4.01 | 0.86 |
| 56. Perform computations | 4.67 | 0.62 | 4.70 | 0.60 | 4.61 | 0.65 |
| 57. Read/Interpret various graphs | 4.40 | 0.76 | 4.46 | 0.73 | 4.30 | 0.79 |
| 58. Recognize numerical data | 3.92 | 0.89 | 3.92 | 0.92 | 3.90 | 0.84 |
| 59. Demonstrate ability to analyze | 3.85 | 0.87 | 3.88 | 0.87 | 3.79 | 0.86 |
| † 60. Interpret Mean, Median, Mode | 3.56 | 0.95 | 3.60 | 0.96 | 3.49 | 0.94 |
| † 61. Interpret Range, Variance, S.D. | 3.22 | 0.96 | 3.27 | 0.97 | 3.13 | 0.94 |
| 62. Select sequence of operations | 4.04 | 0.87 | 4.07 | 0.88 | 3.98 | 0.84 |
| † 63. Recognize relationships among variables | 3.20 | 1.07 | 3.15 | 1.06 | 3.27 | 1.08 |
| 64. Solve simple equations | 4.14 | 0.98 | 4.18 | 0.99 | 4.08 | 0.95 |
| 65. Write equations using variables | 3.51 | 1.05 | 3.53 | 1.06 | 3.46 | 1.02 |
| † 66. Recognize patterns | 3.36 | 1.04 | 3.38 | 1.06 | 3.30 | 1.01 |
| 67. Use formulas for determining length | 3.52 | 1.07 | 3.51 | 1.08 | 3.55 | 1.05 |
| 68. Use various systems of measurement | 3.64 | 1.04 | 3.64 | 1.06 | 3.66 | 1.02 |
| 69. Convert units - measurement system | 3.57 | 1.06 | 3.56 | 1.07 | 3.57 | 1.03 |
| 70. Interpret logical connectives | 3.67 | 0.98 | 3.73 | 0.97 | 3.55 | 0.97 |
| 71. Use deductive/inductive reasoning | 3.75 | 0.96 | 3.77 | 0.97 | 3.69 | 0.94 |
| 72. Draw correct conclusions | 3.62 | 1.01 | 3.63 | 1.02 | 3.60 | 0.99 |
| 73. Demonstrate ways to find answers | 3.98 | 0.90 | 4.03 | 0.90 | 3.89 | 0.88 |
| † 74. Demonstrate fundamental algorithms | 3.66 | 1.07 | 3.76 | 1.06 | 3.47 | 1.07 |
| † 75. Use examples from history of math | 2.72 | 1.04 | 2.73 | 1.06 | 2.69 | 1.00 |

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| | TOTAL | | FEMALE | | MALE | |
|---|---|---|---|---|---|---|
| III. MATHEMATICS (cont'd) | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 76. Express key concept of math | 4.08 | 1.00 | 4.16 | 0.98 | 3.92 | 1.01 |
| 77. Use calculator as tool | 4.09 | 0.96 | 4.12 | 0.95 | 4.04 | 0.97 |
| † 78. Use a variety of materials | 3.76 | 1.14 | 3.91 | 1.15 | 3.48 | 1.08 |
| IV. LISTENING | | | | | | |
| 79. Recall actual wording of message | 3.62 | 1.08 | 3.65 | 1.10 | 3.56 | 1.03 |
| 80. Recall + paraphrase spoken message | 4.35 | 0.75 | 4.42 | 0.74 | 4.24 | 0.76 |
| 81. Select info. in a spoken message | 4.29 | 0.74 | 4.36 | 0.71 | 4.14 | 0.76 |
| 82. Recognize a speaker's question | 4.59 | 0.62 | 4.67 | 0.59 | 4.46 | 0.64 |
| 83. Understand implied cont. in message | 4.13 | 0.76 | 4.21 | 0.75 | 3.99 | 0.75 |
| 84. Understand meaning of fig. of speech | 3.96 | 0.85 | 4.03 | 0.85 | 3.84 | 0.84 |
| 85. Interpret purp. of rhetorical device | 3.70 | 0.89 | 3.74 | 0.90 | 3.62 | 0.86 |
| 86. Recognize organiz.-spoken message | 3.76 | 0.91 | 3.82 | 0.94 | 3.65 | 0.83 |
| 87. Ident. main idea of message-directly | 4.63 | 0.62 | 4.70 | 0.58 | 4.52 | 0.68 |
| 88. Ident. main idea of mess-inferable | 4.27 | 0.74 | 4.35 | 0.73 | 4.12 | 0.76 |
| 89. Identify a speaker's purpose | 4.31 | 0.76 | 4.36 | 0.76 | 4.23 | 0.77 |
| 90. Recognize strength/weakness in logic | 3.95 | 0.80 | 3.95 | 0.82 | 3.95 | 0.76 |
| 91. Determine facts presented are relev. | 4.05 | 0.79 | 4.06 | 0.82 | 4.03 | 0.74 |
| 92. Determine statements are fact/opinion | 4.12 | 0.80 | 4.16 | 0.81 | 4.04 | 0.79 |
| 93. Identify basis of logical argument | 4.37 | 0.74 | 4.42 | 0.72 | 4.28 | 0.76 |
| 94. Identify assumption of log. argument | 3.86 | 0.83 | 3.87 | 0.84 | 3.82 | 0.83 |
| 95. Identify affective/emotional content | 3.81 | 0.86 | 3.85 | 0.86 | 3.72 | 0.87 |
| 96. Focus on a spoken message | 3.91 | 0.91 | 3.98 | 0.90 | 3.77 | 0.91 |
| 97. Understand oral instructions given | 4.59 | 0.63 | 4.65 | 0.60 | 4.49 | 0.68 |
| 98. Use cues such as pitch | 4.17 | 0.81 | 4.23 | 0.81 | 4.08 | 0.80 |
| 99. Recognize dialects of spoken English | 3.72 | 0.97 | 3.83 | 0.94 | 3.51 | 0.98 |
| †100. Understand spoken English dialects | 3.47 | 0.96 | 3.57 | 0.95 | 3.29 | 0.96 |

| | TOTAL | | FEMALE | | MALE | |
|---|---|---|---|---|---|---|
| V. SPEAKING | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 101. Enunciate words | 4.64 | 0.60 | 4.72 | 0.54 | 4.50 | 0.68 |
| 102. Speak in a fluent manner | 4.44 | 0.71 | 4.52 | 0.67 | 4.29 | 0.76 |
| 103. Speak at rate to be understood | 4.61 | 0.59 | 4.68 | 0.55 | 4.49 | 0.64 |
| 104. Speak loudly to be heard | 4.67 | 0.57 | 4.72 | 0.54 | 4.57 | 0.61 |
| 105. Use tone of voice to convey message | 4.39 | 0.71 | 4.48 | 0.68 | 4.25 | 0.74 |
| 106. Place stress appropriately | 4.42 | 0.69 | 4.48 | 0.68 | 4.31 | 0.71 |
| 107. Use eye contact | 4.53 | 0.67 | 4.61 | 0.63 | 4.39 | 0.72 |
| 108. Use grammatical structure correctly | 4.59 | 0.64 | 4.72 | 0.53 | 4.35 | 0.75 |
| 109. Adjust grammatical complexity | 4.40 | 0.76 | 4.49 | 0.73 | 4.23 | 0.79 |
| 110. Demonstrate basic working vocabulary | 4.54 | 0.64 | 4.63 | 0.59 | 4.38 | 0.69 |
| 111. Recognize message not understood | 4.64 | 0.59 | 4.70 | 0.55 | 4.53 | 0.63 |
| 112. Supply synonym for a word | 4.53 | 0.65 | 4.63 | 0.61 | 4.34 | 0.67 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.66 | 4.57 | 0.63 | 4.35 | 0.71 |
| 114. Adjust to unexpected change | 4.19 | 0.79 | 4.30 | 0.75 | 4.00 | 0.82 |
| 115. Use spoken lang. for variety of purp. | 4.49 | 0.67 | 4.58 | 0.63 | 4.33 | 0.72 |
| 116. Speak concisely and to the point | 4.53 | 0.63 | 4.59 | 0.59 | 4.42 | 0.67 |
| 117. Read aloud with intonation | 4.38 | 0.73 | 4.50 | 0.68 | 4.17 | 0.78 |
| VI. INTERACTIVE COMMUNICATION SKILLS | | | | | | |
| 118. Get a listener's attention | 4.57 | 0.63 | 4.64 | 0.59 | 4.45 | 0.69 |
| 119. Give verbal/non-verbal feedback | 4.26 | 0.76 | 4.35 | 0.72 | 4.08 | 0.79 |
| 120. Exercise gd. judgment-oral interaction | 4.32 | 0.72 | 4.41 | 0.70 | 4.17 | 0.73 |
| 121. Direct verbal interaction | 4.19 | 0.76 | 4.27 | 0.74 | 4.03 | 0.78 |
| 122. Adapt to a variety of comm. situations | 4.21 | 0.75 | 4.29 | 0.73 | 4.07 | 0.77 |
| 123. Request clarification of spoken mess. | 4.41 | 0.69 | 4.46 | 0.67 | 4.31 | 0.71 |
| 124. Be aware of listener's non-verbal cues | 4.24 | 0.74 | 4.35 | 0.69 | 4.05 | 0.77 |
| 125. Be aware of one own non-verbal cues | 4.31 | 0.73 | 4.40 | 0.69 | 4.13 | 0.77 |

| VI. INTERACTIVE COMMUNICATION SKILLS | TOTAL | | FEMALE | | MALE | |
|---|---|---|---|---|---|---|
| | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 126. Respond to listener's signs | 4.48 | 0.66 | 4.56 | 0.62 | 4.33 | 0.69 |
| 127. Match spoken mess. to audience level | 4.41 | 0.69 | 4.48 | 0.66 | 4.27 | 0.72 |
| 128. Refrain from interruptions | 4.31 | 0.74 | 4.36 | 0.73 | 4.21 | 0.75 |
| 129. Listen to speaker and summarize ideas | 4.27 | 0.74 | 4.33 | 0.72 | 4.15 | 0.75 |
| 130. Listen to two speakers and compare | 3.98 | 0.84 | 4.02 | 0.85 | 3.89 | 0.81 |
| 131. Listen to someone describe situation | 3.79 | 0.87 | 3.82 | 0.88 | 3.72 | 0.84 |
| 132. Obtain information from diff. resources | 4.14 | 0.81 | 4.20 | 0.81 | 4.04 | 0.80 |
| 133. Listen to a disc. and evaluate logic | 4.25 | 0.76 | 4.27 | 0.78 | 4.22 | 0.73 |
| 134. Observe/describe an incident | 4.00 | 0.83 | 4.04 | 0.83 | 3.93 | 0.83 |

Appendix K

Primary Teacher Respondents: Mean Ratings by Teaching Experience

| L READING | TOTAL N=2269 | | ≤ 5 yrs N=186 | | 6 - 10 yrs N=315 | | 11 - 15 yrs N=470 | | 16 - 20 yrs N=545 | | ≥ 21 yrs N=730 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D |
| 1. Determine main idea | 4.77 | 0.49 | 4.73 | 0.49 | 4.79 | 0.44 | 4.76 | 0.50 | 4.80 | 0.45 | 4.76 | 0.54 |
| 2. Locate important ideas | 4.62 | 0.60 | 4.67 | 0.52 | 4.62 | 0.56 | 4.63 | 0.60 | 4.64 | 0.59 | 4.60 | 0.63 |
| 3. Identify accurate paraphrases | 4.30 | 0.78 | 4.33 | 0.72 | 4.25 | 0.79 | 4.35 | 0.78 | 4.36 | 0.78 | 4.24 | 0.79 |
| 4. Determine supporting ideas | 4.35 | 0.75 | 4.37 | 0.71 | 4.32 | 0.75 | 4.39 | 0.76 | 4.38 | 0.74 | 4.31 | 0.76 |
| 5. Recognize an argument | 4.20 | 0.81 | 4.18 | 0.77 | 4.13 | 0.84 | 4.19 | 0.78 | 4.26 | 0.81 | 4.19 | 0.84 |
| 6. Determine facts/ideas | 4.25 | 0.78 | 4.26 | 0.82 | 4.21 | 0.79 | 4.24 | 0.75 | 4.30 | 0.76 | 4.24 | 0.81 |
| 7. Identify strength/weakness | 3.94 | 0.86 | 3.91 | 0.92 | 3.88 | 0.86 | 3.93 | 0.85 | 4.01 | 0.85 | 3.92 | 0.88 |
| 8. Recognize techniques | 3.73 | 0.93 | 3.80 | 0.91 | 3.63 | 0.92 | 3.71 | 0.95 | 3.75 | 0.94 | 3.76 | 0.92 |
| 9. Recognize elements | 4.04 | 0.84 | 3.99 | 0.85 | 3.98 | 0.84 | 4.01 | 0.84 | 4.03 | 0.86 | 4.09 | 0.83 |
| 10. Identify logical assumptions | 3.93 | 0.84 | 3.86 | 0.85 | 3.91 | 0.85 | 3.90 | 0.84 | 3.95 | 0.83 | 3.96 | 0.85 |
| 11. Recognize point of view | 4.06 | 0.83 | 4.04 | 0.86 | 3.98 | 0.81 | 4.07 | 0.84 | 4.08 | 0.85 | 4.08 | 0.80 |
| 12. Perceive what is implied | 4.00 | 0.83 | 4.01 | 0.85 | 4.02 | 0.81 | 4.00 | 0.82 | 4.00 | 0.83 | 3.99 | 0.84 |
| 13. Recognize attitude expressed | 3.86 | 0.86 | 3.91 | 0.82 | 3.82 | 0.84 | 3.87 | 0.85 | 3.88 | 0.86 | 3.83 | 0.87 |
| † 14. Recognize style | 3.37 | 0.92 | 3.46 | 0.90 | 3.31 | 0.87 | 3.39 | 0.92 | 3.39 | 0.93 | 3.34 | 0.93 |
| 15. Distinguish facts/opinion | 4.38 | 0.78 | 4.38 | 0.77 | 4.39 | 0.75 | 4.37 | 0.79 | 4.45 | 0.76 | 4.35 | 0.82 |
| 16. Recognize ideas/situations | 3.78 | 0.86 | 3.86 | 0.81 | 3.72 | 0.83 | 3.75 | 0.87 | 3.86 | 0.87 | 3.76 | 0.88 |
| 17. Determine author's purpose | 3.78 | 0.99 | 3.61 | 0.97 | 3.75 | 1.00 | 3.80 | 1.03 | 3.85 | 0.98 | 3.76 | 0.98 |
| 18. Understand reading selections | 3.77 | 0.91 | 3.84 | 0.86 | 3.74 | 0.88 | 3.72 | 0.92 | 3.80 | 0.92 | 3.79 | 0.92 |
| 19. Use table of contents | 4.68 | 0.61 | 4.73 | 0.52 | 4.72 | 0.55 | 4.72 | 0.60 | 4.69 | 0.60 | 4.65 | 0.65 |
| 20. Arrange ideas in reading selection | 4.02 | 0.90 | 4.09 | 0.85 | 4.00 | 0.91 | 4.05 | 0.90 | 4.04 | 0.90 | 3.99 | 0.91 |

† Mean of less than 3.50 for one or more respondent subgroups

| | TOTAL | | ≤ 5 yrs | | 6 - 10 yrs | | 11 - 15 yrs | | 16 - 20 yrs | | ≥ 21 yrs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. READING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 21. Identify relationships | 4.05 | 0.81 | 4.10 | 0.75 | 4.05 | 0.81 | 4.02 | 0.82 | 4.08 | 0.82 | 4.04 | 0.83 |
| 22. Determine implied relationships | 3.97 | 0.83 | 3.99 | 0.73 | 3.99 | 0.81 | 3.98 | 0.83 | 3.98 | 0.81 | 3.95 | 0.87 |
| 23. Locate place in reading selection | 4.12 | 0.91 | 4.14 | 0.83 | 4.12 | 0.98 | 4.22 | 0.88 | 4.12 | 0.93 | 4.06 | 0.89 |
| 24. Recognize different interpretations | 3.99 | 0.83 | 4.10 | 0.76 | 3.99 | 0.83 | 3.99 | 0.83 | 3.97 | 0.85 | 3.98 | 0.82 |
| 25. Identify what author assumes | 3.69 | 0.89 | 3.81 | 0.88 | 3.70 | 0.90 | 3.71 | 0.85 | 3.68 | 0.91 | 3.65 | 0.89 |
| 26. Recognize meaning of word | 4.25 | 0.78 | 4.27 | 0.78 | 4.28 | 0.74 | 4.24 | 0.78 | 4.27 | 0.82 | 4.23 | 0.79 |
| 27. Determine meaning of figuration | 3.93 | 0.87 | 3.99 | 0.91 | 3.94 | 0.83 | 3.94 | 0.86 | 3.92 | 0.89 | 3.93 | 0.87 |
| 28. Understand function-key transit. | 3.93 | 0.88 | 4.03 | 0.80 | 3.92 | 0.87 | 3.94 | 0.86 | 3.94 | 0.89 | 3.89 | 0.90 |
| 29. Compare/combine ideas | 4.15 | 0.81 | 4.27 | 0.80 | 4.19 | 0.78 | 4.20 | 0.83 | 4.13 | 0.82 | 4.10 | 0.82 |
| 30. Identify inconsistencies | 4.03 | 0.85 | 4.11 | 0.83 | 4.02 | 0.86 | 4.04 | 0.89 | 4.03 | 0.83 | 4.02 | 0.84 |
| 31. Specify appropriate reference source | 4.43 | 0.77 | 4.45 | 0.76 | 4.51 | 0.68 | 4.49 | 0.74 | 4.43 | 0.76 | 4.37 | 0.81 |
| 32. Understand reading materials | 3.94 | 0.87 | 4.08 | 0.79 | 3.98 | 0.86 | 3.95 | 0.88 | 3.93 | 0.87 | 3.89 | 0.88 |
| II. WRITING | | | | | | | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.67 | 4.49 | 0.62 | 4.48 | 0.67 | 4.45 | 0.66 | 4.45 | 0.67 | 4.43 | 0.69 |
| 34. Delineate steps in a process | 4.59 | 0.61 | 4.67 | 0.57 | 4.62 | 0.58 | 4.60 | 0.60 | 4.62 | 0.60 | 4.53 | 0.65 |
| 35. Support a position | 4.26 | 0.76 | 4.32 | 0.76 | 4.28 | 0.75 | 4.24 | 0.76 | 4.26 | 0.80 | 4.24 | 0.73 |
| 36. Analyze ideas | 4.33 | 0.72 | 4.40 | 0.66 | 4.33 | 0.75 | 4.33 | 0.71 | 4.33 | 0.72 | 4.32 | 0.71 |
| 37. Provide a clear focus | 4.33 | 0.76 | 4.43 | 0.74 | 4.33 | 0.73 | 4.33 | 0.78 | 4.30 | 0.77 | 4.31 | 0.76 |
| 38. Produce/develop supp. materials | 4.28 | 0.75 | 4.43 | 0.64 | 4.28 | 0.77 | 4.26 | 0.80 | 4.28 | 0.75 | 4.24 | 0.75 |
| 39. Organize ideas | 4.61 | 0.59 | 4.66 | 0.57 | 4.64 | 0.55 | 4.64 | 0.57 | 4.62 | 0.60 | 4.57 | 0.62 |
| 40. Use vocabulary appropriately | 4.56 | 0.63 | 4.64 | 0.59 | 4.59 | 0.58 | 4.59 | 0.61 | 4.57 | 0.65 | 4.52 | 0.65 |
| 41. Present ideas in writing | 3.78 | 0.87 | 3.99 | 0.83 | 3.79 | 0.87 | 3.73 | 0.89 | 3.74 | 0.87 | 3.78 | 0.87 |
| 42. Present alternative points | 3.82 | 0.85 | 3.93 | 0.84 | 3.84 | 0.82 | 3.80 | 0.85 | 3.83 | 0.86 | 3.80 | 0.87 |

| | TOTAL | | ≤ 5 yrs | | 6 - 10 yrs | | 11 - 15 yrs | | 16 - 20 yrs | | ≥ 21 yrs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| II. WRITING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 43. Produce writing free of errors | 4.53 | 0.70 | 4.54 | 0.69 | 4.54 | 0.66 | 4.52 | 0.74 | 4.53 | 0.70 | 4.53 | 0.69 |
| 44. Recognize basic grammatical errors | 4.65 | 0.62 | 4.70 | 0.58 | 4.68 | 0.58 | 4.63 | 0.65 | 4.67 | 0.60 | 4.64 | 0.64 |
| 45. Recognize effective sentence structure | 4.22 | 0.81 | 4.20 | 0.67 | 4.20 | 0.80 | 4.13 | 0.85 | 4.24 | 0.80 | 4.26 | 0.78 |
| 46. Recognize inappropriate language | 4.18 | 0.81 | 4.21 | 0.79 | 4.25 | 0.77 | 4.16 | 0.80 | 4.19 | 0.84 | 4.16 | 0.81 |
| 47. Revise sentences | 4.55 | 0.68 | 4.51 | 0.68 | 4.59 | 0.63 | 4.57 | 0.69 | 4.57 | 0.67 | 4.54 | 0.70 |
| 48. Revise paragraphs to create | 4.22 | 0.77 | 4.28 | 0.73 | 4.24 | 0.70 | 4.24 | 0.76 | 4.23 | 0.78 | 4.18 | 0.80 |
| 49. Revise paragraphs to clarify | 4.22 | 0.77 | 4.28 | 0.74 | 4.24 | 0.73 | 4.21 | 0.75 | 4.22 | 0.80 | 4.20 | 0.79 |
| III. MATHEMATICS | | | | | | | | | | | | |
| 50. Recognize position of numbers | 4.36 | 0.79 | 4.38 | 0.77 | 4.41 | 0.74 | 4.39 | 0.76 | 4.36 | 0.83 | 4.33 | 0.81 |
| 51. Recognize equivalent forms | 4.26 | 0.84 | 4.21 | 0.80 | 4.35 | 0.76 | 4.29 | 0.82 | 4.25 | 0.88 | 4.23 | 0.85 |
| 52. Solve problems | 4.20 | 0.81 | 4.21 | 0.84 | 4.26 | 0.76 | 4.26 | 0.79 | 4.22 | 0.81 | 4.13 | 0.84 |
| 53. Use appropriate form of number | 4.17 | 0.81 | 4.25 | 0.77 | 4.17 | 0.78 | 4.25 | 0.79 | 4.16 | 0.83 | 4.12 | 0.83 |
| 54. Demonstrate charact. of counting #'s | 4.00 | 0.94 | 3.95 | 1.01 | 4.19 | 0.83 | 4.01 | 0.94 | 3.95 | 0.96 | 3.96 | 0.94 |
| 55. Interpret and apply ratio | 4.01 | 0.87 | 3.99 | 0.90 | 4.03 | 0.81 | 3.98 | 0.85 | 4.03 | 0.88 | 4.00 | 0.90 |
| 56. Perform computations | 4.67 | 0.62 | 4.70 | 0.56 | 4.72 | 0.53 | 4.65 | 0.62 | 4.73 | 0.59 | 4.61 | 0.69 |
| 57. Read/interpret various graphs | 4.40 | 0.76 | 4.40 | 0.80 | 4.43 | 0.68 | 4.42 | 0.73 | 4.43 | 0.76 | 4.35 | 0.79 |
| 58. Recognize numerical data | 3.92 | 0.89 | 3.94 | 0.92 | 3.88 | 0.88 | 3.91 | 0.88 | 3.93 | 0.89 | 3.91 | 0.90 |
| 59. Demonstrate ability to analyze | 3.85 | 0.87 | 3.86 | 0.88 | 3.81 | 0.88 | 3.85 | 0.85 | 3.88 | 0.87 | 3.84 | 0.87 |
| 60. Interpret Mean, Median, Mode | 3.56 | 0.95 | 3.70 | 0.98 | 3.53 | 0.91 | 3.54 | 0.91 | 3.56 | 0.98 | 3.54 | 0.97 |
| † 61. Interpret Range, Variance, S.D. | 3.22 | 0.96 | 3.38 | 0.96 | 3.12 | 0.94 | 3.22 | 0.96 | 3.21 | 0.96 | 3.22 | 0.97 |
| 62. Select sequence of operations | 4.04 | 0.87 | 4.06 | 0.90 | 4.02 | 0.83 | 4.05 | 0.87 | 4.08 | 0.84 | 4.01 | 0.90 |
| † 63. Recognize relationships among variables | 3.20 | 1.07 | 3.30 | 1.03 | 3.15 | 1.04 | 3.11 | 1.05 | 3.21 | 1.08 | 3.23 | 1.09 |
| 64. Solve simple equations | 4.14 | 0.98 | 4.45 | 0.83 | 4.28 | 0.90 | 4.10 | 1.00 | 4.12 | 0.98 | 4.04 | 1.01 |

| III. MATHEMATICS (cont.) | TOTAL | | ≤ 5 yrs | | 6 - 10 yrs | | 11 - 15 yrs | | 16 - 20 yrs | | ≥ 21 yrs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| † 65. Write equations using variables | 3.51 | 1.05 | 3.70 | 0.97 | 3.56 | 1.02 | 3.50 | 1.07 | 3.50 | 1.05 | 3.44 | 1.05 |
| † 66. Recognize patterns | 3.36 | 1.04 | 3.46 | 0.99 | 3.36 | 0.96 | 3.29 | 1.05 | 3.36 | 1.08 | 3.36 | 1.05 |
| 67. Use formulas for determining length | 3.52 | 1.07 | 3.56 | 1.04 | 3.52 | 1.02 | 3.52 | 1.09 | 3.51 | 1.09 | 3.51 | 1.06 |
| 68. Use various systems of measurement | 3.65 | 1.04 | 3.63 | 0.97 | 3.69 | 1.00 | 3.63 | 1.04 | 3.63 | 1.08 | 3.59 | 1.05 |
| 69. Convert units - measurement system | 3.57 | 1.06 | 3.72 | 1.04 | 3.63 | 1.04 | 3.53 | 1.04 | 3.53 | 1.09 | 3.55 | 1.05 |
| 70. Interpret logical connectives | 3.67 | 0.98 | 3.88 | 0.90 | 3.64 | 0.97 | 3.61 | 0.97 | 3.66 | 0.98 | 3.67 | 0.99 |
| 71. Use deductive/inductive reasoning | 3.75 | 0.96 | 3.87 | 0.93 | 3.68 | 0.94 | 3.68 | 0.97 | 3.75 | 0.95 | 3.78 | 0.97 |
| 72. Draw correct conclusions | 3.62 | 1.01 | 3.69 | 0.95 | 3.57 | 0.99 | 3.58 | 1.03 | 3.63 | 0.99 | 3.63 | 1.02 |
| 73. Demonstrate ways to find answers | 3.98 | 0.90 | 4.09 | 0.85 | 4.01 | 0.89 | 3.95 | 0.91 | 3.97 | 0.87 | 3.96 | 0.93 |
| 74. Demonstrate fundamental algorithms | 3.66 | 1.07 | 3.83 | 1.03 | 3.69 | 1.03 | 3.61 | 1.06 | 3.67 | 1.09 | 3.61 | 1.10 |
| † 75. Use examples from history of math | 2.72 | 1.04 | 2.75 | 1.06 | 2.71 | 1.04 | 2.64 | 1.00 | 2.69 | 1.05 | 2.78 | 1.05 |
| 76. Express key concept of math | 4.08 | 1.00 | 4.15 | 0.98 | 4.10 | 0.93 | 4.07 | 1.02 | 4.07 | 1.01 | 4.05 | 1.00 |
| 77. Use calculator as tool | 4.09 | 0.96 | 4.09 | 0.98 | 4.17 | 0.97 | 4.14 | 0.96 | 4.14 | 0.95 | 4.00 | 0.95 |
| 78. Use a variety of materials | 3.76 | 1.14 | 3.85 | 1.17 | 3.91 | 1.09 | 3.75 | 1.17 | 3.73 | 1.15 | 3.69 | 1.13 |
| IV. LISTENING | | | | | | | | | | | | |
| 79. Recall actual wording of message | 3.62 | 1.08 | 3.65 | 1.01 | 3.66 | 1.09 | 3.61 | 1.10 | 3.54 | 1.13 | 3.65 | 1.03 |
| 80. Recall & paraphrase spoken message | 4.35 | 0.75 | 4.45 | 0.69 | 4.39 | 0.76 | 4.37 | 0.75 | 4.33 | 0.77 | 4.31 | 0.75 |
| 81. Select info. in a spoken message | 4.29 | 0.74 | 4.33 | 0.74 | 4.34 | 0.70 | 4.27 | 0.74 | 4.30 | 0.77 | 4.25 | 0.72 |
| 82. Recognize a speaker's question | 4.59 | 0.62 | 4.62 | 0.58 | 4.67 | 0.58 | 4.60 | 0.62 | 4.60 | 0.64 | 4.55 | 0.62 |
| 83. Understand implied cont. in message | 4.13 | 0.76 | 4.13 | 0.70 | 4.18 | 0.78 | 4.13 | 0.77 | 4.14 | 0.77 | 4.10 | 0.75 |
| 84. Understand meaning of fig. of speech | 3.96 | 0.85 | 3.88 | 0.92 | 4.00 | 0.85 | 3.94 | 0.84 | 4.01 | 0.84 | 3.95 | 0.85 |
| 85. Interpret purp. of rhetorical device | 3.70 | 0.89 | 3.70 | 0.92 | 3.73 | 0.88 | 3.66 | 0.91 | 3.70 | 0.91 | 3.71 | 0.87 |
| 86. Recognize organiz.-spoken message | 3.76 | 0.91 | 3.73 | 0.94 | 3.79 | 0.92 | 3.72 | 0.93 | 3.75 | 0.92 | 3.78 | 0.87 |



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| | TOTAL | | ≤ 5 yrs | | 6 - 10 yrs | | 11 - 15 yrs | | 16 - 20 yrs | | ≥ 21 yrs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IV. LISTENING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 87. Ident. main idea of message-directly | 4.63 | 0.62 | 4.64 | 0.61 | 4.66 | 0.57 | 4.63 | 0.61 | 4.64 | 0.62 | 4.62 | 0.65 |
| 88. Ident. main idea of mess-inferable | 4.27 | 0.74 | 4.34 | 0.70 | 4.31 | 0.75 | 4.27 | 0.73 | 4.27 | 0.77 | 4.22 | 0.74 |
| 89. Identify a speaker's purpose | 4.31 | 0.76 | 4.31 | 0.75 | 4.35 | 0.73 | 4.33 | 0.75 | 4.30 | 0.80 | 4.30 | 0.77 |
| 90. Recognize strength/weakness in logic | 3.96 | 0.80 | 3.95 | 0.79 | 3.91 | 0.82 | 3.92 | 0.80 | 3.96 | 0.81 | 3.99 | 0.79 |
| 91. Determine facts presented are relev. | 4.05 | 0.79 | 4.14 | 0.78 | 3.99 | 0.84 | 3.98 | 0.80 | 4.06 | 0.79 | 4.08 | 0.77 |
| 92. Determine statements are fact/opinion | 4.12 | 0.80 | 4.18 | 0.77 | 4.11 | 0.80 | 4.09 | 0.83 | 4.11 | 0.81 | 4.12 | 0.79 |
| 93. Identify basis of logical argument | 4.37 | 0.74 | 4.42 | 0.68 | 4.37 | 0.76 | 4.36 | 0.75 | 4.38 | 0.72 | 4.36 | 0.76 |
| 94. Identify assumption of log. argument | 3.86 | 0.83 | 3.93 | 0.79 | 3.78 | 0.83 | 3.81 | 0.85 | 3.84 | 0.83 | 3.90 | 0.83 |
| 95. Identify affective/emotional content | 3.81 | 0.86 | 3.79 | 0.84 | 3.83 | 0.89 | 3.78 | 0.87 | 3.82 | 0.85 | 3.79 | 0.87 |
| 96. Focus on a spoken message | 3.91 | 0.91 | 4.05 | 0.87 | 3.91 | 0.90 | 3.93 | 0.94 | 3.86 | 0.92 | 3.89 | 0.89 |
| 97. Understand oral instructions given | 4.59 | 0.63 | 4.58 | 0.59 | 4.59 | 0.61 | 4.59 | 0.63 | 4.61 | 0.62 | 4.57 | 0.66 |
| 98. Use cues such as pitch | 4.18 | 0.81 | 4.36 | 0.71 | 4.24 | 0.81 | 4.16 | 0.81 | 4.13 | 0.87 | 4.15 | 0.78 |
| 99. Recognize dialects of spoken English | 3.72 | 0.97 | 3.88 | 0.96 | 3.78 | 0.93 | 3.72 | 0.96 | 3.69 | 1.02 | 3.66 | 0.96 |
| † 100. Understand spoken English dialects | 3.47 | 0.96 | 3.66 | 0.93 | 3.54 | 0.90 | 3.50 | 0.98 | 3.38 | 0.98 | 3.44 | 0.96 |
| V. SPEAKING | | | | | | | | | | | | |
| 101. Enunciate words | 4.64 | 0.60 | 4.69 | 0.55 | 4.67 | 0.53 | 4.68 | 0.56 | 4.62 | 0.63 | 4.62 | 0.63 |
| 102. Speak in a fluent manner | 4.44 | 0.71 | 4.60 | 0.59 | 4.42 | 0.73 | 4.44 | 0.69 | 4.42 | 0.75 | 4.41 | 0.71 |
| 103. Speak at rate to be understood | 4.61 | 0.59 | 4.69 | 0.54 | 4.63 | 0.57 | 4.61 | 0.58 | 4.59 | 0.62 | 4.60 | 0.61 |
| 104. Speak loudly to be heard | 4.67 | 0.57 | 4.72 | 0.52 | 4.70 | 0.56 | 4.67 | 0.54 | 4.66 | 0.60 | 4.65 | 0.58 |
| 105. Use tone of voice to convey message | 4.39 | 0.71 | 4.51 | 0.64 | 4.46 | 0.70 | 4.39 | 0.69 | 4.37 | 0.74 | 4.35 | 0.72 |
| 106. Place stress appropriately | 4.42 | 0.69 | 4.47 | 0.68 | 4.45 | 0.70 | 4.42 | 0.66 | 4.41 | 0.71 | 4.41 | 0.70 |
| 107. Use eye contact | 4.53 | 0.67 | 4.69 | 0.53 | 4.57 | 0.69 | 4.55 | 0.63 | 4.49 | 0.71 | 4.50 | 0.69 |
| 108. Use grammatical structure correctly | 4.59 | 0.64 | 4.58 | 0.62 | 4.60 | 0.62 | 4.58 | 0.64 | 4.63 | 0.61 | 4.56 | 0.68 |

| | TOTAL | | ≤ 5 yrs | | 6 - 10 yrs | | 11 - 15 yrs | | 16 - 20 yrs | | ≥ 21 yrs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V. SPEAKING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 109. Adjust grammatical complexity | 4.40 | 0.76 | 4.43 | 0.71 | 4.50 | 0.69 | 4.43 | 0.75 | 4.40 | 0.78 | 4.33 | 0.80 |
| 110. Demonstrate basic working vocabulary | 4.54 | 0.64 | 4.55 | 0.63 | 4.53 | 0.63 | 4.58 | 0.62 | 4.54 | 0.65 | 4.52 | 0.64 |
| 111. Recognize message not understood | 4.64 | 0.59 | 4.76 | 0.52 | 4.68 | 0.57 | 4.64 | 0.57 | 4.61 | 0.60 | 4.61 | 0.60 |
| 112. Supply synonym for a word | 4.53 | 0.65 | 4.58 | 0.67 | 4.60 | 0.60 | 4.53 | 0.65 | 4.53 | 0.65 | 4.49 | 0.65 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.66 | 4.55 | 0.62 | 4.56 | 0.60 | 4.49 | 0.65 | 4.47 | 0.70 | 4.46 | 0.69 |
| 114. Adjust to unexpected change | 4.19 | 0.79 | 4.27 | 0.75 | 4.25 | 0.77 | 4.27 | 0.72 | 4.19 | 0.84 | 4.10 | 0.81 |
| 115. Use spoken lang. for variety of purp. | 4.49 | 0.67 | 4.49 | 0.69 | 4.50 | 0.67 | 4.52 | 0.66 | 4.49 | 0.69 | 4.46 | 0.66 |
| 116. Speak concisely and to the point | 4.53 | 0.63 | 4.56 | 0.61 | 4.54 | 0.65 | 4.54 | 0.62 | 4.53 | 0.64 | 4.52 | 0.63 |
| 117. Read aloud with intonation | 4.38 | 0.73 | 4.50 | 0.68 | 4.37 | 0.75 | 4.38 | 0.72 | 4.38 | 0.74 | 4.36 | 0.74 |
| VI. INTERACTIVE COMMUNICATION SKILLS | | | | | | | | | | | | |
| 118. Get a listener's attention | 4.57 | 0.63 | 4.65 | 0.58 | 4.60 | 0.62 | 4.60 | 0.60 | 4.53 | 0.66 | 4.56 | 0.65 |
| 119. Give verbal/non-verbal feedback | 4.26 | 0.76 | 4.41 | 0.66 | 4.33 | 0.77 | 4.31 | 0.72 | 4.25 | 0.78 | 4.15 | 0.77 |
| 120. Exercise good judgment-oral interaction | 4.32 | 0.72 | 4.41 | 0.64 | 4.39 | 0.71 | 4.33 | 0.69 | 4.29 | 0.78 | 4.29 | 0.71 |
| 121. Direct verbal interaction | 4.19 | 0.76 | 4.35 | 0.69 | 4.24 | 0.76 | 4.22 | 0.76 | 4.15 | 0.80 | 4.13 | 0.75 |
| 122. Adapt to a variety of comm. situations | 4.25 | 0.75 | 4.31 | 0.68 | 4.26 | 0.75 | 4.24 | 0.73 | 4.21 | 0.77 | 4.15 | 0.76 |
| 123. Request clarification of spoken mess. | 4.43 | 0.69 | 4.46 | 0.63 | 4.41 | 0.72 | 4.46 | 0.64 | 4.38 | 0.72 | 4.39 | 0.70 |
| 124. Be aware of listener's non-verbal cues | 4.26 | 0.74 | 4.34 | 0.66 | 4.30 | 0.73 | 4.29 | 0.71 | 4.24 | 0.76 | 4.17 | 0.75 |
| 125. Be aware of one own non-verbal cues | 4.32 | 0.73 | 4.36 | 0.68 | 4.38 | 0.72 | 4.37 | 0.68 | 4.29 | 0.77 | 4.23 | 0.75 |
| 126. Respond to listener's signs | 4.49 | 0.66 | 4.60 | 0.62 | 4.54 | 0.64 | 4.49 | 0.63 | 4.48 | 0.66 | 4.42 | 0.68 |
| 127. Match spoken mess. to audience level | 4.41 | 0.69 | 4.44 | 0.66 | 4.46 | 0.68 | 4.42 | 0.63 | 4.37 | 0.73 | 4.38 | 0.70 |
| 128. Refrain from interruptions | 4.31 | 0.74 | 4.35 | 0.70 | 4.36 | 0.72 | 4.29 | 0.74 | 4.27 | 0.77 | 4.31 | 0.73 |
| 129. Listen to speaker and summarize ideas | 4.27 | 0.74 | 4.36 | 0.72 | 4.32 | 0.70 | 4.27 | 0.74 | 4.27 | 0.77 | 4.20 | 0.74 |
| 130. Listen to two speakers and compare | 3.98 | 0.84 | 4.05 | 0.83 | 4.03 | 0.80 | 3.94 | 0.85 | 3.99 | 0.86 | 3.94 | 0.82 |



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| VI. INTERACTIVE COMMUNICATION SKILLS (cont.) | TOTAL | | ≤ 5 yrs | | 6 - 10 yrs | | 11 - 15 yrs | | 16 - 20 yrs | | ≥ 21 yrs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 131. Listen to someone describe situation | 3.78 | 0.87 | 3.92 | 0.85 | 3.80 | 0.83 | 3.75 | 0.86 | 3.79 | 0.88 | 3.75 | 0.88 |
| 132. Obtain information from diff. resources | 4.14 | 0.81 | 4.19 | 0.80 | 4.21 | 0.77 | 4.16 | 0.82 | 4.14 | 0.83 | 4.09 | 0.81 |
| 133. Listen to a disc. and evaluate logic | 4.25 | 0.76 | 4.26 | 0.79 | 4.28 | 0.76 | 4.21 | 0.79 | 4.26 | 0.77 | 4.25 | 0.73 |
| 134. Observe/describe an incident | 4.00 | 0.83 | 4.02 | 0.83 | 4.08 | 0.78 | 4.01 | 0.83 | 3.98 | 0.86 | 3.97 | 0.84 |

Appendix L

Primary Teacher Respondents: Mean Ratings by Subject Taught

| | TOTAL N=2269 | | B & V Ed. [a] N=110 | | Soc. Sci. [b] N=225 | | P & B Sci. [c] N=194 | | M & C Sci [d] N=263 | | Lan. Arts [e] N=364 | | Special Ed. [f] N=185 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. READING | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D |
| 1. Determine main idea | 4.77 | 0.49 | 4.69 | 0.59 | 4.80 | 0.41 | 4.78 | 0.42 | 4.70 | 0.58 | 4.84 | 0.44 | 4.79 | 0.45 |
| 2. Locate important ideas | 4.62 | 0.60 | 4.49 | 0.66 | 4.67 | 0.51 | 4.63 | 0.52 | 4.48 | 0.74 | 4.74 | 0.55 | 4.66 | 0.53 |
| 3. Identify accurate paraphrases | 4.30 | 0.78 | 4.14 | 0.89 | 4.33 | 0.72 | 4.37 | 0.71 | 4.19 | 0.86 | 4.46 | 0.75 | 4.32 | 0.73 |
| 4. Determine supporting ideas | 4.35 | 0.75 | 4.05 | 0.83 | 4.37 | 0.71 | 4.26 | 0.71 | 4.11 | 0.84 | 4.51 | 0.71 | 4.44 | 0.68 |
| 5. Recognize an argument | 4.20 | 0.81 | 3.98 | 0.86 | 4.41 | 0.73 | 4.21 | 0.76 | 4.14 | 0.85 | 4.42 | 0.71 | 4.17 | 0.75 |
| 6. Determine facts/ideas | 4.25 | 0.78 | 4.05 | 0.85 | 4.47 | 0.65 | 4.33 | 0.73 | 4.20 | 0.84 | 4.44 | 0.67 | 4.22 | 0.73 |
| 7. Identify strength/weakness | 3.94 | 0.86 | 3.72 | 0.88 | 4.16 | 0.77 | 3.99 | 0.83 | 3.82 | 0.92 | 4.18 | 0.80 | 3.92 | 0.82 |
| † 8. Recognize techniques | 3.73 | 0.93 | 3.38 | 0.98 | 3.89 | 0.87 | 3.64 | 0.93 | 3.56 | 0.95 | 3.93 | 0.92 | 3.69 | 0.86 |
| 9. Recognize elements | 4.04 | 0.84 | 3.66 | 0.92 | 4.19 | 0.76 | 3.97 | 0.82 | 3.86 | 0.93 | 4.23 | 0.78 | 4.05 | 0.81 |
| 10. Identify logical assumptions | 3.93 | 0.84 | 3.66 | 0.92 | 4.06 | 0.79 | 4.08 | 0.78 | 3.83 | 0.89 | 4.10 | 0.79 | 3.93 | 0.79 |
| 11. Recognize point of view | 4.06 | 0.83 | 3.90 | 0.88 | 4.28 | 0.74 | 4.08 | 0.81 | 3.96 | 0.90 | 4.07 | 0.85 | 4.05 | 0.75 |
| 12. Perceive what is implied | 4.00 | 0.83 | 3.56 | 0.91 | 3.99 | 0.80 | 3.96 | 0.79 | 3.79 | 0.87 | 4.26 | 0.78 | 4.06 | 0.76 |
| 13. Recognize attitude expressed | 3.86 | 0.86 | 3.57 | 0.93 | 3.96 | 0.81 | 3.84 | 0.86 | 3.56 | 0.92 | 4.11 | 0.79 | 3.89 | 0.79 |
| † 14. Recognize style | 3.37 | 0.92 | 2.97 | 0.96 | 3.43 | 0.89 | 3.27 | 0.94 | 3.11 | 0.97 | 3.51 | 0.89 | 3.32 | 0.74 |
| 15. Distinguish facts/opinion | 4.38 | 0.78 | 4.14 | 0.93 | 4.54 | 0.65 | 4.40 | 0.72 | 4.27 | 0.82 | 4.50 | 0.71 | 4.39 | 0.80 |
| † 16. Recognize ideas/situations | 3.78 | 0.86 | 3.44 | 0.89 | 3.84 | 0.76 | 3.81 | 0.84 | 3.53 | 0.92 | 3.97 | 0.82 | 3.75 | 0.86 |
| † 17. Determine author's purpose | 3.78 | 0.99 | 3.33 | 0.98 | 3.87 | 0.88 | 3.66 | 1.04 | 3.44 | 0.99 | 4.05 | 0.94 | 3.74 | 0.96 |
| 18. Understand reading selections | 3.77 | 0.91 | 3.47 | 0.95 | 3.88 | 0.87 | 3.79 | 0.86 | 3.52 | 0.93 | 3.88 | 0.88 | 3.72 | 0.91 |

† Mean of less than 3.50 for one or more respondent subgroups
a = Business and Vocational Education
b = Social Sciences
c = Physical and Biological Sciences
d = Mathematics and Computer Science
e = Language Arts
f = Special Education

| | TOTAL | | B & V Ed. [a] | | Soc. Sci. [b] | | P & B Sci. [c] | | M & C Sci [d] | | Lan. Arts [e] | | Special Ed. [f] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. READING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 19. Use table of contents | 4.68 | 0.61 | 4.74 | 0.48 | 4.66 | 0.62 | 4.72 | 0.57 | 4.68 | 0.61 | 4.68 | 0.64 | 4.68 | 0.59 |
| 20. Arrange ideas in reading selection | 4.02 | 0.90 | 3.99 | 0.88 | 4.10 | 0.82 | 4.09 | 0.85 | 3.84 | 0.97 | 4.00 | 0.96 | 4.09 | 0.86 |
| 21. Identify relationships | 4.05 | 0.81 | 3.73 | 0.90 | 4.20 | 0.76 | 4.08 | 0.77 | 3.81 | 0.88 | 4.07 | 0.81 | 4.14 | 0.77 |
| 22. Determine implied relationships | 3.97 | 0.83 | 3.77 | 0.83 | 4.11 | 0.78 | 3.95 | 0.81 | 3.74 | 0.92 | 4.12 | 0.81 | 3.94 | 0.77 |
| 23. Locate place in reading selection | 4.12 | 0.91 | 4.08 | 0.92 | 4.11 | 0.86 | 4.03 | 0.91 | 3.94 | 1.01 | 4.20 | 0.89 | 4.24 | 0.85 |
| 24. Recognize different interpretations | 3.99 | 0.83 | 3.75 | 0.89 | 3.98 | 0.80 | 3.94 | 0.78 | 3.87 | 0.88 | 4.07 | 0.83 | 4.11 | 0.80 |
| † 25. Identify what author assumes | 3.69 | 0.89 | 3.49 | 0.97 | 3.70 | 0.87 | 3.73 | 0.84 | 3.62 | 0.91 | 3.80 | 0.87 | 3.90 | 0.85 |
| 26. Recognize meaning of word | 4.25 | 0.78 | 4.02 | 0.90 | 4.22 | 0.79 | 4.17 | 0.77 | 4.07 | 0.81 | 4.35 | 0.75 | 4.34 | 0.75 |
| 27. Determine meaning of figuration | 3.93 | 0.87 | 3.69 | 0.90 | 3.89 | 0.80 | 3.82 | 0.88 | 3.75 | 0.91 | 3.99 | 0.88 | 4.03 | 0.82 |
| 28. Understand function-key transit. | 3.93 | 0.88 | 3.84 | 0.86 | 3.94 | 0.86 | 3.86 | 0.88 | 3.72 | 0.93 | 4.06 | 0.87 | 4.02 | 0.83 |
| 29. Compare/combine ideas | 4.15 | 0.81 | 3.93 | 0.81 | 4.29 | 0.75 | 4.23 | 0.75 | 4.04 | 0.86 | 4.28 | 0.81 | 4.09 | 0.78 |
| 30. Identify inconsistencies | 4.03 | 0.85 | 3.84 | 0.89 | 4.17 | 0.82 | 4.12 | 0.80 | 4.00 | 0.83 | 4.16 | 0.82 | 3.93 | 0.86 |
| 31. Specify appropriate reference source | 4.43 | 0.77 | 4.30 | 0.84 | 4.43 | 0.77 | 4.43 | 0.72 | 4.30 | 0.83 | 4.44 | 0.77 | 4.49 | 0.73 |
| 32. Understand reading materials | 3.94 | 0.87 | 3.65 | 0.97 | 3.89 | 0.81 | 3.78 | 0.87 | 3.75 | 0.93 | 4.19 | 0.79 | 4.05 | 0.86 |
| II. WRITING | | | | | | | | | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.67 | 4.39 | 0.68 | 4.42 | 0.61 | 4.44 | 0.61 | 4.38 | 0.71 | 4.47 | 0.71 | 4.53 | 0.65 |
| 34. Delineate steps in a process | 4.59 | 0.61 | 4.55 | 0.60 | 4.53 | 0.63 | 4.69 | 0.57 | 4.58 | 0.62 | 4.64 | 0.62 | 4.60 | 0.60 |
| 35. Support a position | 4.26 | 0.76 | 4.03 | 0.78 | 4.43 | 0.67 | 4.19 | 0.77 | 4.12 | 0.76 | 4.42 | 0.73 | 4.30 | 0.74 |
| 36. Analyze ideas | 4.33 | 0.72 | 4.17 | 0.66 | 4.45 | 0.67 | 4.47 | 0.66 | 4.22 | 0.76 | 4.39 | 0.70 | 4.30 | 0.75 |
| 37. Provide a clear focus | 4.33 | 0.76 | 4.13 | 0.74 | 4.45 | 0.71 | 4.34 | 0.75 | 4.24 | 0.82 | 4.52 | 0.67 | 4.36 | 0.76 |
| 38. Produce/develop supp. materials | 4.28 | 0.75 | 4.07 | 0.76 | 4.29 | 0.73 | 4.35 | 0.69 | 4.10 | 0.76 | 4.47 | 0.67 | 4.32 | 0.81 |

| | TOTAL | | B & V Ed. [a] | | Soc. Sci. [b] | | P & B Sci. [c] | | M & C Sci [d] | | Lan. Arts [e] | | Special Ed. [f] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| II. WRITING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 39. Organize ideas | 4.61 | 0.59 | 4.51 | 0.54 | 4.62 | 0.56 | 4.64 | 0.55 | 4.56 | 0.61 | 4.69 | 0.58 | 4.63 | 0.56 |
| 40. Use vocabulary appropriately | 4.56 | 0.63 | 4.48 | 0.57 | 4.52 | 0.61 | 4.52 | 0.61 | 4.53 | 0.67 | 4.60 | 0.63 | 4.64 | 0.56 |
| 41. Present ideas in writing | 3.78 | 0.87 | 3.51 | 0.92 | 3.78 | 0.78 | 3.85 | 0.90 | 3.51 | 0.91 | 3.80 | 0.88 | 3.91 | 0.77 |
| 42. Present alternative points | 3.82 | 0.85 | 3.65 | 0.85 | 3.94 | 0.80 | 3.75 | 0.90 | 3.65 | 0.90 | 3.85 | 0.89 | 3.95 | 0.75 |
| 43. Produce writing free of errors | 4.53 | 0.70 | 4.48 | 0.77 | 4.46 | 0.70 | 4.45 | 0.69 | 4.50 | 0.69 | 4.59 | 0.66 | 4.64 | 0.64 |
| 44. Recognize basic grammatical errors | 4.65 | 0.62 | 4.51 | 0.72 | 4.56 | 0.64 | 4.57 | 0.67 | 4.57 | 0.67 | 4.73 | 0.57 | 4.73 | 0.51 |
| 45. Recognize eff. sentence structure | 4.22 | 0.81 | 4.16 | 0.87 | 4.20 | 0.75 | 4.14 | 0.74 | 4.14 | 0.81 | 4.28 | 0.78 | 4.28 | 0.76 |
| 46. Recognize inappropriate language | 4.18 | 0.81 | 3.97 | 0.88 | 4.13 | 0.80 | 4.13 | 0.74 | 4.15 | 0.84 | 4.26 | 0.79 | 4.21 | 0.79 |
| 47. Revise sentences | 4.55 | 0.68 | 4.37 | 0.75 | 4.45 | 0.67 | 4.43 | 0.74 | 4.45 | 0.79 | 4.69 | 0.60 | 4.62 | 0.60 |
| 48. Revise paragraphs to create | 4.22 | 0.77 | 4.17 | 0.79 | 4.20 | 0.72 | 4.19 | 0.78 | 4.11 | 0.79 | 4.26 | 0.72 | 4.29 | 0.72 |
| 49. Revise paragraphs to clarify | 4.22 | 0.77 | 4.11 | 0.80 | 4.19 | 0.74 | 4.15 | 0.76 | 4.11 | 0.81 | 4.34 | 0.72 | 4.22 | 0.79 |
| III. MATHEMATICS | | | | | | | | | | | | | | |
| 50. Recognize position of numbers | 4.36 | 0.79 | 4.17 | 0.92 | 4.23 | 0.85 | 4.41 | 0.66 | 4.41 | 0.82 | 4.32 | 0.86 | 4.38 | 0.72 |
| 51. Recognize equivalent forms | 4.26 | 0.84 | 4.21 | 0.91 | 4.17 | 0.85 | 4.38 | 0.73 | 4.38 | 0.82 | 4.17 | 0.93 | 4.26 | 0.79 |
| 52. Solve problems | 4.20 | 0.81 | 3.94 | 0.88 | 4.14 | 0.77 | 4.17 | 0.77 | 4.31 | 0.80 | 4.18 | 0.84 | 4.20 | 0.76 |
| 53. Use appropriate form of number | 4.17 | 0.81 | 4.22 | 0.76 | 4.10 | 0.82 | 4.13 | 0.75 | 4.06 | 0.85 | 4.20 | 0.88 | 4.13 | 0.83 |
| 54. Demonstrate charact. of counting #'s | 4.00 | 0.94 | 3.91 | 0.93 | 3.89 | 0.94 | 3.96 | 0.87 | 3.90 | 0.99 | 3.94 | 1.04 | 4.00 | 0.91 |
| 55. Interpret and apply ratio | 4.01 | 0.87 | 3.95 | 0.93 | 4.09 | 0.87 | 4.25 | 0.78 | 4.17 | 0.86 | 3.93 | 0.92 | 3.89 | 0.84 |
| 56. Perform computations | 4.67 | 0.62 | 4.62 | 0.61 | 4.58 | 0.66 | 4.77 | 0.49 | 4.65 | 0.67 | 4.64 | 0.70 | 4.75 | 0.49 |
| 57. Read/interpret various graphs | 4.40 | 0.76 | 4.17 | 0.82 | 4.48 | 0.71 | 4.55 | 0.62 | 4.38 | 0.82 | 4.34 | 0.82 | 4.34 | 0.77 |
| 58. Recognize numerical data | 3.92 | 0.89 | 3.85 | 0.81 | 4.02 | 0.82 | 4.21 | 0.79 | 4.00 | 0.88 | 3.87 | 0.95 | 3.85 | 0.88 |



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| III. MATHEMATICS (cont.) | TOTAL | | B & V Ed. [a] | | Soc. Scl. [b] | | P & B Scl. [c] | | M & C Scl [d] | | Lan. Arts [e] | | Special Ed. [f] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 59. Demonstrate ability to analyze | 3.85 | 0.87 | 3.75 | 0.89 | 3.89 | 0.85 | 4.08 | 0.77 | 3.96 | 0.81 | 3.78 | 0.94 | 3.72 | 0.83 |
| † 60. Interpret Mean, Median, Mode | 3.56 | 0.95 | 3.39 | 1.02 | 3.49 | 0.91 | 3.63 | 0.91 | 3.75 | 0.92 | 3.55 | 0.98 | 3.52 | 0.92 |
| † 61. Interpret Range, Variance, S.D. | 3.22 | 0.96 | 3.11 | 0.96 | 3.18 | 0.94 | 3.28 | 0.87 | 3.15 | 0.95 | 3.21 | 1.04 | 3.18 | 0.93 |
| 62. Select sequence of operations | 4.04 | 0.87 | 3.92 | 0.92 | 3.82 | 0.84 | 4.15 | 0.79 | 4.25 | 0.81 | 3.85 | 0.97 | 4.04 | 0.83 |
| † 63. Recognize rel. among variables | 3.20 | 1.07 | 3.10 | 1.05 | 3.05 | 1.01 | 3.72 | 0.96 | 3.66 | 1.05 | 3.03 | 1.09 | 3.01 | 0.96 |
| 64. Solve simple equations | 4.14 | 0.98 | 3.96 | 1.15 | 3.96 | 0.97 | 4.31 | 0.81 | 4.22 | 0.93 | 3.85 | 1.10 | 4.17 | 0.92 |
| † 65. Write equations using variables | 3.51 | 1.05 | 3.28 | 1.05 | 3.29 | 1.02 | 3.80 | 0.97 | 3.87 | 0.98 | 3.28 | 1.07 | 3.40 | 0.99 |
| † 66. Recognize patterns | 3.36 | 1.04 | 3.09 | 1.00 | 3.14 | 1.06 | 3.59 | 0.90 | 3.48 | 1.09 | 3.20 | 1.08 | 3.24 | 0.96 |
| † 67. Use formulas for determining length | 3.52 | 1.07 | 3.34 | 1.06 | 3.26 | 1.05 | 3.92 | 0.90 | 3.86 | 1.01 | 3.27 | 1.14 | 3.47 | 0.96 |
| † 68. Use various systems of measurement | 3.65 | 1.04 | 3.46 | 1.05 | 3.51 | 1.04 | 4.11 | 0.90 | 3.79 | 1.05 | 3.52 | 1.07 | 3.55 | 1.01 |
| † 69. Convert units - measurement system | 3.57 | 1.06 | 3.61 | 1.11 | 3.64 | 0.95 | 3.81 | 1.07 | 3.32 | 1.12 | 3.54 | 1.11 | 3.43 | 1.06 |
| † 70. Interpret logical connectives | 3.67 | 0.98 | 3.34 | 0.96 | 3.65 | 0.97 | 3.73 | 0.87 | 3.63 | 0.96 | 3.77 | 1.01 | 3.67 | 0.95 |
| † 71. Use deductive/inductive reasoning | 3.75 | 0.96 | 3.41 | 0.97 | 3.84 | 0.97 | 3.89 | 0.87 | 3.81 | 0.91 | 3.87 | 0.95 | 3.65 | 0.96 |
| † 72. Draw correct conclusions | 3.62 | 1.01 | 3.33 | 1.00 | 3.65 | 0.98 | 3.90 | 0.95 | 3.84 | 0.98 | 3.67 | 1.05 | 3.45 | 1.02 |
| 73. Demonstrate ways to find answers | 3.98 | 0.90 | 3.90 | 0.91 | 3.80 | 0.88 | 4.09 | 0.79 | 4.09 | 0.84 | 3.89 | 0.96 | 3.96 | 0.87 |
| † 74. Demonstrate fundamental algorithms | 3.66 | 1.07 | 3.45 | 1.07 | 3.30 | 1.10 | 3.62 | 0.98 | 3.84 | 0.96 | 3.41 | 1.15 | 3.67 | 1.02 |
| † 75. Use examples from history of math | 2.72 | 1.04 | 2.61 | 1.00 | 2.79 | 1.07 | 2.81 | 0.95 | 2.65 | 1.00 | 2.67 | 1.08 | 2.64 | 1.01 |
| 76. Express key concept of math | 4.08 | 1.00 | 3.82 | 1.09 | 3.77 | 1.02 | 4.10 | 0.92 | 4.17 | 0.96 | 3.88 | 1.10 | 4.17 | 0.90 |
| 77. Use calculator as tool | 4.09 | 0.96 | 4.17 | 0.88 | 4.08 | 0.96 | 4.19 | 0.93 | 4.17 | 0.96 | 4.07 | 0.98 | 4.15 | 0.95 |
| † 78. Use a variety of materials | 3.76 | 1.14 | 3.20 | 1.11 | 3.28 | 1.16 | 3.74 | 1.01 | 3.71 | 1.08 | 3.42 | 1.25 | 4.17 | 0.94 |

| | TOTAL | | B & V Ed. [a] | | Soc. Sci. [b] | | P & B Sci. [c] | | M & C Sci [d] | | Lan. Arts [e] | | Special Ed. [f] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IV. LISTENING | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| † 79. Recall actual wording of message | 3.62 | 1.08 | 3.54 | 1.08 | 3.69 | 0.97 | 3.51 | 1.00 | 3.38 | 1.10 | 3.66 | 1.06 | 3.73 | 1.12 |
| 80. Recall/paraphrase spoken message | 4.35 | 0.75 | 4.21 | 0.71 | 4.40 | 0.69 | 4.28 | 0.76 | 4.26 | 0.77 | 4.49 | 0.70 | 4.45 | 0.76 |
| 81. Select info. in a spoken message | 4.29 | 0.74 | 4.20 | 0.76 | 4.32 | 0.69 | 4.27 | 0.66 | 4.17 | 0.80 | 4.38 | 0.70 | 4.37 | 0.75 |
| 82. Recognize a speaker's question | 4.59 | 0.62 | 4.57 | 0.63 | 4.57 | 0.56 | 4.56 | 0.52 | 4.53 | 0.66 | 4.71 | 0.57 | 4.65 | 0.59 |
| 83. Understand implied cont. in message | 4.13 | 0.76 | 3.99 | 0.77 | 4.21 | 0.70 | 4.10 | 0.73 | 4.05 | 0.76 | 4.29 | 0.70 | 4.18 | 0.77 |
| 84. Understand meaning of fig. of speech | 3.96 | 0.85 | 3.88 | 0.83 | 4.04 | 0.79 | 3.90 | 0.86 | 3.81 | 0.85 | 4.03 | 0.86 | 4.02 | 0.87 |
| 85. Interpret purp. of rhetorical device | 3.70 | 0.89 | 3.62 | 0.90 | 3.78 | 0.85 | 3.67 | 0.88 | 3.61 | 0.85 | 3.80 | 0.88 | 3.73 | 0.92 |
| 86. Recognize organiz.-spoken message | 3.76 | 0.91 | 3.50 | 0.87 | 3.86 | 0.83 | 3.68 | 0.83 | 3.63 | 0.89 | 3.90 | 0.92 | 3.78 | 0.93 |
| 87. Ident. main idea of message-directly | 4.63 | 0.62 | 4.48 | 0.62 | 4.64 | 0.56 | 4.64 | 0.59 | 4.59 | 0.70 | 4.70 | 0.61 | 4.66 | 0.60 |
| 88. Ident. main idea of mess-inferable | 4.27 | 0.74 | 4.06 | 0.78 | 4.26 | 0.70 | 4.25 | 0.68 | 4.14 | 0.79 | 4.43 | 0.71 | 4.31 | 0.71 |
| 89. Identify a speaker's purpose | 4.31 | 0.76 | 4.20 | 0.68 | 4.38 | 0.70 | 4.26 | 0.75 | 4.21 | 0.84 | 4.40 | 0.74 | 4.35 | 0.74 |
| 90. Rec. strength/weakness in logic | 3.96 | 0.80 | 3.90 | 0.75 | 4.14 | 0.72 | 3.94 | 0.76 | 3.91 | 0.78 | 4.11 | 0.81 | 3.93 | 0.81 |
| 91. Determine facts presented are relev. | 4.05 | 0.79 | 3.96 | 0.78 | 4.22 | 0.71 | 4.15 | 0.70 | 4.01 | 0.80 | 4.20 | 0.74 | 4.01 | 0.82 |
| 92. Det. sentence is fact/opinion | 4.12 | 0.80 | 4.02 | 0.73 | 4.21 | 0.73 | 4.17 | 0.73 | 4.11 | 0.80 | 4.25 | 0.78 | 4.08 | 0.83 |
| 93. Identify basis of logical argument | 4.37 | 0.74 | 4.18 | 0.76 | 4.50 | 0.64 | 4.39 | 0.70 | 4.27 | 0.80 | 4.48 | 0.71 | 4.38 | 0.70 |
| 94. Identify assumption of log. argument | 3.86 | 0.83 | 3.69 | 0.83 | 4.03 | 0.79 | 3.90 | 0.79 | 3.82 | 0.82 | 4.00 | 0.80 | 3.80 | 0.82 |
| 95. Identify affective/emotional content | 3.81 | 0.86 | 3.65 | 0.87 | 3.94 | 0.86 | 3.79 | 0.87 | 3.71 | 0.85 | 3.94 | 0.82 | 3.82 | 0.85 |
| 96. Focus on a spoken message | 3.91 | 0.91 | 3.85 | 0.89 | 3.91 | 0.88 | 3.94 | 0.81 | 3.84 | 0.90 | 3.99 | 0.92 | 4.03 | 0.89 |
| 97. Understand oral instructions given | 4.59 | 0.63 | 4.54 | 0.65 | 4.58 | 0.61 | 4.65 | 0.53 | 4.53 | 0.67 | 4.68 | 0.63 | 4.63 | 0.56 |
| 98. Use cues such as pitch | 4.18 | 0.81 | 4.11 | 0.86 | 4.18 | 0.78 | 4.21 | 0.73 | 4.05 | 0.81 | 4.25 | 0.78 | 4.22 | 0.75 |

| | TOTAL | | B & V Ed. [a] | | Soc. Sci. [b] | | P & B Sci. [c] | | M & C Sci [d] | | Lan. Arts [e] | | Special Ed. [f] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IV. LISTENING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 99. Recognize dialects of spoken English | 3.72 | 0.97 | 3.59 | 1.00 | 3.73 | 0.95 | 3.51 | 1.03 | 3.62 | 0.98 | 3.78 | 1.04 | 3.90 | 0.92 |
| † 100. Understand spoken English dialects | 3.47 | 0.96 | 3.35 | 0.95 | 3.42 | 0.98 | 3.28 | 0.99 | 3.38 | 0.97 | 3.54 | 0.97 | 3.65 | 0.89 |
| V. SPEAKING | | | | | | | | | | | | | | |
| 101. Enunciate words | 4.64 | 0.60 | 4.52 | 0.65 | 4.56 | 0.60 | 4.67 | 0.51 | 4.61 | 0.64 | 4.69 | 0.61 | 4.65 | 0.59 |
| 102. Speak in a fluent manner | 4.44 | 0.71 | 4.29 | 0.79 | 4.40 | 0.73 | 4.48 | 0.67 | 4.41 | 0.69 | 4.48 | 0.70 | 4.42 | 0.76 |
| 103. Speak at rate to be understood | 4.61 | 0.59 | 4.55 | 0.58 | 4.57 | 0.58 | 4.65 | 0.49 | 4.56 | 0.61 | 4.66 | 0.61 | 4.58 | 0.61 |
| 104. Speak loudly to be heard | 4.67 | 0.57 | 4.65 | 0.53 | 4.63 | 0.55 | 4.71 | 0.47 | 4.64 | 0.59 | 4.74 | 0.56 | 4.67 | 0.56 |
| 105. Use tone of voice to convey message | 4.39 | 0.71 | 4.36 | 0.73 | 4.40 | 0.65 | 4.38 | 0.64 | 4.31 | 0.73 | 4.45 | 0.73 | 4.36 | 0.72 |
| 106. Place stress appropriately | 4.42 | 0.69 | 4.40 | 0.73 | 4.42 | 0.66 | 4.43 | 0.64 | 4.35 | 0.73 | 4.47 | 0.70 | 4.32 | 0.70 |
| 107. Use eye contact | 4.53 | 0.67 | 4.47 | 0.74 | 4.53 | 0.64 | 4.55 | 0.61 | 4.46 | 0.70 | 4.58 | 0.66 | 4.61 | 0.59 |
| 108. Use grammatical structure correctly | 4.59 | 0.64 | 4.49 | 0.71 | 4.51 | 0.66 | 4.51 | 0.61 | 4.52 | 0.66 | 4.66 | 0.64 | 4.60 | 0.65 |
| 109. Adjust grammatical complexity | 4.40 | 0.76 | 4.25 | 0.82 | 4.33 | 0.77 | 4.41 | 0.70 | 4.32 | 0.79 | 4.51 | 0.73 | 4.41 | 0.74 |
| 110. Demonstrate basic working vocab. | 4.54 | 0.64 | 4.40 | 0.65 | 4.56 | 0.57 | 4.51 | 0.58 | 4.43 | 0.70 | 4.64 | 0.62 | 4.57 | 0.61 |
| 111. Recognize message not understood | 4.64 | 0.59 | 4.61 | 0.59 | 4.58 | 0.59 | 4.66 | 0.54 | 4.63 | 0.57 | 4.70 | 0.58 | 4.70 | 0.51 |
| 112. Supply synonym for a word | 4.53 | 0.65 | 4.44 | 0.64 | 4.54 | 0.58 | 4.47 | 0.66 | 4.45 | 0.70 | 4.64 | 0.61 | 4.46 | 0.69 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.66 | 4.45 | 0.64 | 4.44 | 0.66 | 4.42 | 0.64 | 4.40 | 0.70 | 4.55 | 0.67 | 4.58 | 0.61 |
| 114. Adjust to unexpected change | 4.19 | 0.79 | 4.10 | 0.76 | 4.17 | 0.76 | 4.15 | 0.78 | 4.10 | 0.81 | 4.27 | 0.78 | 4.25 | 0.78 |
| 115. Use spoken lang. for variety of purp. | 4.49 | 0.67 | 4.37 | 0.73 | 4.48 | 0.62 | 4.46 | 0.62 | 4.37 | 0.76 | 4.60 | 0.61 | 4.52 | 0.67 |
| 116. Speak concisely and to the point | 4.53 | 0.63 | 4.43 | 0.64 | 4.51 | 0.60 | 4.51 | 0.59 | 4.52 | 0.69 | 4.58 | 0.63 | 4.53 | 0.63 |
| 117. Read aloud with intonation | 4.38 | 0.73 | 4.15 | 0.79 | 4.32 | 0.72 | 4.28 | 0.74 | 4.22 | 0.81 | 4.48 | 0.67 | 4.37 | 0.72 |

| VI. INTERACTIVE COMMUNICATION SKILLS | TOTAL | | B & V Ed. [a] | | Soc. Sci. [b] | | P & B Sci. [c] | | M & C Sci [d] | | Lan. Arts [e] | | Special Ed. [f] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 118. Get a listener's attention | 4.57 | 0.63 | 4.50 | 0.65 | 4.56 | 0.64 | 4.50 | 0.69 | 4.54 | 0.65 | 4.54 | 0.67 | 4.56 | 0.61 |
| 119. Give verbal/non-verbal feedback | 4.26 | 0.76 | 4.28 | 0.72 | 4.23 | 0.76 | 4.23 | 0.73 | 4.12 | 0.84 | 4.33 | 0.73 | 4.28 | 0.70 |
| 120. Exer good judgment-oral interaction | 4.32 | 0.72 | 4.26 | 0.75 | 4.31 | 0.70 | 4.29 | 0.72 | 4.25 | 0.73 | 4.40 | 0.68 | 4.36 | 0.66 |
| 121. Direct verbal interaction | 4.19 | 0.76 | 4.09 | 0.76 | 4.14 | 0.77 | 4.19 | 0.73 | 4.09 | 0.76 | 4.28 | 0.71 | 4.24 | 0.74 |
| 122. Adapt to a variety of comm. sits. | 4.25 | 0.75 | 4.11 | 0.75 | 4.16 | 0.74 | 4.23 | 0.71 | 4.15 | 0.80 | 4.29 | 0.75 | 4.22 | 0.71 |
| 123. Request clarification of spoken mess. | 4.43 | 0.69 | 4.41 | 0.70 | 4.40 | 0.63 | 4.49 | 0.60 | 4.42 | 0.66 | 4.43 | 0.74 | 4.40 | 0.69 |
| 124. Be aware listener's non-verbal cues | 4.26 | 0.7[illegible] | 4.15 | 0.74 | 4.24 | 0.71 | 4.24 | 0.68 | 4.16 | 0.74 | 4.31 | 0.76 | 4.27 | 0.70 |
| 125. Be aware one's own non-verbal cues | 4.32 | 0.73 | 4.23 | 0.80 | 4.28 | 0.69 | 4.27 | 0.68 | 4.25 | 0.72 | 4.37 | 0.76 | 4.33 | 0.71 |
| 126. Respond to listener's signs | 4.49 | 0.66 | 4.44 | 0.66 | 4.42 | 0.66 | 4.50 | 0.62 | 4.48 | 0.63 | 4.55 | 0.66 | 4.50 | 0.64 |
| 127. Match spoken mess./audience level | 4.41 | 0.69 | 4.31 | 0.72 | 4.40 | 0.66 | 4.40 | 0.65 | 4.31 | 0.70 | 4.48 | 0.70 | 4.42 | 0.67 |
| 128. Refrain from interruptions | 4.31 | 0.74 | 4.17 | 0.76 | 4.27 | 0.72 | 4.33 | 0.69 | 4.34 | 0.69 | 4.39 | 0.73 | 4.22 | 0.74 |
| 129. Listen to speaker/summarize ideas | 4.27 | 0.74 | 4.17 | 0.79 | 4.25 | 0.71 | 4.27 | 0.69 | 4.20 | 0.76 | 4.37 | 0.72 | 4.18 | 0.77 |
| 130. Listen to two speakers and compare | 3.98 | 0.84 | 3.85 | 0.84 | 4.05 | 0.78 | 4.03 | 0.75 | 3.90 | 0.86 | 4.11 | 0.86 | 3.86 | 0.79 |
| 131. Listen to someone describe situation | 3.78 | 0.87 | 3.71 | 0.89 | 4.00 | 0.77 | 3.83 | 0.82 | 3.69 | 0.87 | 3.92 | 0.83 | 3.74 | 0.87 |
| 132. Obtain info. from diff. resources | 4.14 | 0.81 | 4.02 | 0.73 | 4.29 | 0.67 | 4.25 | 0.70 | 3.98 | 0.87 | 4.31 | 0.78 | 4.13 | 0.82 |
| 133. Listen to a disc. and evaluate logic | 4.25 | 0.76 | 4.16 | 0.70 | 4.32 | 0.67 | 4.25 | 0.72 | 4.21 | 0.78 | 4.38 | 0.70 | 4.19 | 0.80 |
| 134. Observe/describe an incident | 4.00 | 0.83 | 3.81 | 0.85 | 4.08 | 0.74 | 4.16 | 0.77 | 3.85 | 0.86 | 4.14 | 0.80 | 3.90 | 0.88 |

Appendix M

Primary Teacher Respondents: Mean Ratings by School Setting

| | | TOTAL N=2269 | | URBAN N=622 | | SUBURBAN N=783 | | RURAL N=820 | |
|---|---|---|---|---|---|---|---|---|---|
| L | READING | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| | 1. Determine main idea | 4.77 | 0.49 | 4.76 | 0.51 | 4.80 | 0.45 | 4.74 | 0.51 |
| | 2. Locate important ideas | 4.62 | 0.60 | 4.63 | 0.61 | 4.64 | 0.57 | 4.60 | 0.61 |
| | 3. Identify accurate paraphrases | 4.30 | 0.78 | 4.32 | 0.81 | 4.36 | 0.74 | 4.23 | 0.79 |
| | 4. Determine supporting ideas | 4.35 | 0.75 | 4.39 | 0.76 | 4.38 | 0.72 | 4.28 | 0.76 |
| | 5. Recognize an argument | 4.20 | 0.81 | 4.27 | 0.81 | 4.29 | 0.77 | 4.06 | 0.84 |
| | 6. Determine facts/ideas | 4.25 | 0.78 | 4.33 | 0.76 | 4.30 | 0.76 | 4.15 | 0.82 |
| | 7. Identify strength/weakness | 3.94 | 0.86 | 4.00 | 0.89 | 3.98 | 0.81 | 3.85 | 0.88 |
| | 8. Recognize techniques | 3.73 | 0.93 | 3.78 | 0.93 | 3.76 | 0.90 | 3.66 | 0.95 |
| | 9. Recognize elements | 4.04 | 0.84 | 4.09 | 0.85 | 4.08 | 0.83 | 3.96 | 0.84 |
| | 10. Identify logical assumptions | 3.93 | 0.84 | 4.02 | 0.83 | 3.97 | 0.84 | 3.82 | 0.84 |
| | 11. Recognize point of view | 4.06 | 0.83 | 4.10 | 0.85 | 4.11 | 0.79 | 3.98 | 0.84 |
| | 12. Perceive what is implied | 4.00 | 0.83 | 4.05 | 0.85 | 4.03 | 0.82 | 3.92 | 0.82 |
| | 13. Recognize attitude expressed | 3.86 | 0.86 | 3.90 | 0.88 | 3.89 | 0.83 | 3.79 | 0.86 |
| † | 14. Recognize style | 3.37 | 0.92 | 3.42 | 0.94 | 3.37 | 0.89 | 3.31 | 0.92 |
| | 15. Distinguish facts/opinion | 4.39 | 0.78 | 4.41 | 0.77 | 4.44 | 0.76 | 4.31 | 0.81 |
| | 16. Recognize ideas/situations | 3.78 | 0.86 | 3.85 | 0.90 | 3.78 | 0.83 | 3.74 | 0.86 |
| | 17. Determine author's purpose | 3.78 | 0.99 | 3.81 | 1.01 | 3.81 | 0.98 | 3.72 | 0.99 |
| | 18. Understand reading selections | 3.77 | 0.91 | 3.82 | 0.92 | 3.80 | 0.91 | 3.70 | 0.90 |
| | 19. Use table of contents | 4.69 | 0.61 | 4.68 | 0.64 | 4.71 | 0.56 | 4.67 | 0.61 |
| | 20. Arrange ideas in reading selection | 4.02 | 0.90 | 4.05 | 0.92 | 4.07 | 0.86 | 3.95 | 0.93 |
| | 21. Identify relationships | 4.05 | 0.81 | 4.10 | 0.84 | 4.08 | 0.80 | 3.99 | 0.81 |
| | 22. Determine implied relationships | 3.97 | 0.83 | 4.02 | 0.86 | 4.00 | 0.78 | 3.91 | 0.84 |
| | 23. Locate place in reading selection | 4.12 | 0.91 | 4.14 | 0.93 | 4.15 | 0.89 | 4.09 | 0.90 |
| | 24. Recognize different interpretations | 3.99 | 0.83 | 4.09 | 0.83 | 3.98 | 0.83 | 3.92 | 0.82 |
| | 25. Identify what author assumes | 3.69 | 0.89 | 3.75 | 0.92 | 3.67 | 0.85 | 3.65 | 0.89 |
| | 26. Recognize meaning of word | 4.25 | 0.78 | 4.29 | 0.79 | 4.25 | 0.79 | 4.22 | 0.79 |
| | 27. Determine meaning of figuration | 3.93 | 0.87 | 3.99 | 0.86 | 3.93 | 0.85 | 3.90 | 0.89 |
| | 28. Understand function-key transit. | 3.93 | 0.88 | 3.99 | 0.87 | 3.95 | 0.86 | 3.86 | 0.89 |

†Mean of less than 3.50 for one or more respondent subgroups

| | TOTAL | | URBAN | | SUBURBAN | | RURAL | |
|---|---|---|---|---|---|---|---|---|
| I. READING (cont'd) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 29. Compare/combine ideas | 4.16 | 0.81 | 4.15 | 0.83 | 4.19 | 0.79 | 4.13 | 0.82 |
| 30. Identify inconsistencies | 4.03 | 0.85 | 4.10 | 0.82 | 4.07 | 0.83 | 3.95 | 0.88 |
| 31. Specify appropriate reference source | 4.43 | 0.77 | 4.49 | 0.72 | 4.43 | 0.78 | 4.40 | 0.78 |
| 32. Understand reading materials | 3.94 | 0.87 | 4.04 | 0.83 | 3.95 | 0.87 | 3.86 | 0.88 |
| II. WRITING | | | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.67 | 4.48 | 0.66 | 4.46 | 0.66 | 4.42 | 0.68 |
| 34. Delineate steps in a process | 4.59 | 0.61 | 4.58 | 0.62 | 4.62 | 0.60 | 4.57 | 0.63 |
| 35. Support a position | 4.26 | 0.76 | 4.30 | 0.75 | 4.28 | 0.74 | 4.19 | 0.78 |
| 36. Analyze ideas | 4.33 | 0.72 | 4.37 | 0.70 | 4.35 | 0.70 | 4.29 | 0.74 |
| 37. Provide a clear focus | 4.33 | 0.76 | 4.38 | 0.73 | 4.33 | 0.78 | 4.28 | 0.77 |
| 38. Produce/develop supp. materials | 4.28 | 0.75 | 4.29 | 0.73 | 4.31 | 0.74 | 4.24 | 0.78 |
| 39. Organize ideas | 4.61 | 0.59 | 4.65 | 0.57 | 4.63 | 0.59 | 4.56 | 0.61 |
| 40. Use vocabulary appropriatly | 4.57 | 0.63 | 4.60 | 0.64 | 4.56 | 0.61 | 4.53 | 0.64 |
| 41. Present ideas in writing | 3.78 | 0.87 | 3.86 | 0.86 | 3.72 | 0.86 | 3.76 | 0.88 |
| 42. Present alternative points | 3.82 | 0.85 | 3.88 | 0.86 | 3.80 | 0.84 | 3.79 | 0.86 |
| 43. Produce writing free of errors | 4.53 | 0.70 | 4.58 | 0.68 | 4.52 | 0.69 | 4.50 | 0.71 |
| 44. Recognize basic grammatical errors | 4.66 | 0.62 | 4.71 | 0.58 | 4.66 | 0.62 | 4.63 | 0.65 |
| 45. Recognize effective sentence structure | 4.22 | 0.81 | 4.30 | 0.78 | 4.20 | 0.81 | 4.17 | 0.84 |
| 46. Recognize inappropriate language | 4.18 | 0.81 | 4.24 | 0.82 | 4.18 | 0.79 | 4.13 | 0.81 |
| 47. Revise sentences | 4.56 | 0.68 | 4.62 | 0.64 | 4.54 | 0.69 | 4.53 | 0.70 |
| 48. Revise paragraphs to create | 4.22 | 0.77 | 4.28 | 0.76 | 4.21 | 0.74 | 4.18 | 0.80 |
| 49. Revise paragraphs to clarify | 4.22 | 0.77 | 4.29 | 0.77 | 4.22 | 0.75 | 4.16 | 0.79 |
| III. MATHEMATICS | | | | | | | | |
| 50. Recognize position of numbers | 4.36 | 0.79 | 4.37 | 0.82 | 4.39 | 0.78 | 4.34 | 0.78 |
| 51. Recognize equivalent forms | 4.26 | 0.84 | 4.28 | 0.87 | 4.26 | 0.82 | 4.25 | 0.82 |
| 52. Solve problems | 4.20 | 0.81 | 4.24 | 0.81 | 4.21 | 0.80 | 4.17 | 0.83 |

| | | TOTAL | | URBAN | | SUBURBAN | | RURAL | |
|---|---|---|---|---|---|---|---|---|---|
| III. | MATHEMATICS (cont'd) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| | 53. Use appropriate form of number | 4.18 | 0.81 | 4.23 | 0.82 | 4.17 | 0.80 | 4.14 | 0.81 |
| | 54. Demonstrate charact. of counting #'s | 4.00 | 0.94 | 4.05 | 0.96 | 3.98 | 0.92 | 3.97 | 0.94 |
| | 55. Interpret and apply ratio | 4.01 | 0.87 | 4.04 | 0.88 | 4.00 | 0.86 | 3.99 | 0.89 |
| | 56. Perform computations | 4.67 | 0.62 | 4.66 | 0.63 | 4.69 | 0.61 | 4.65 | 0.63 |
| | 57. Read/interpret various graphs | 4.40 | 0.76 | 4.38 | 0.80 | 4.44 | 0.72 | 4.38 | 0.76 |
| | 58. Recognize numerical data | 3.92 | 0.89 | 3.94 | 0.92 | 3.91 | 0.89 | 3.90 | 0.87 |
| | 59. Demonstrate ability to analyze | 3.85 | 0.87 | 3.90 | 0.87 | 3.83 | 0.87 | 3.82 | 0.87 |
| † | 60. Interpret Mean, Median, Mode | 3.56 | 0.95 | 3.63 | 0.94 | 3.56 | 0.96 | 3.49 | 0.95 |
| † | 61. Interpret Range, Variance, S.D. | 3.22 | 0.96 | 3.28 | 0.98 | 3.19 | 0.95 | 3.19 | 0.95 |
| | 62. Select sequence of operations | 4.04 | 0.87 | 4.08 | 0.90 | 3.99 | 0.88 | 4.06 | 0.84 |
| † | 63. Recognize relationships among variables | 3.20 | 1.07 | 3.23 | 1.08 | 3.16 | 1.08 | 3.20 | 1.05 |
| | 64. Solve simple equations | 4.14 | 0.98 | 4.12 | 1.00 | 4.13 | 0.98 | 4.16 | 0.96 |
| † | 65. Write equations using variables | 3.51 | 1.05 | 3.54 | 1.07 | 3.50 | 1.04 | 3.48 | 1.03 |
| † | 66. Recognize patterns | 3.36 | 1.04 | 3.38 | 1.09 | 3.37 | 0.99 | 3.32 | 1.05 |
| † | 67. Use formulas for determining length | 3.52 | 1.07 | 3.50 | 1.09 | 3.48 | 1.04 | 3.56 | 1.07 |
| | 68. Use various systems of measurement | 3.64 | 1.04 | 3.67 | 1.08 | 3.58 | 1.02 | 3.67 | 1.05 |
| | 69. Convert units - measurement system | 3.57 | 1.06 | 3.64 | 1.07 | 3.50 | 1.06 | 3.56 | 1.04 |
| | 70. Interpret logical connectives | 3.67 | 0.98 | 3.78 | 0.99 | 3.65 | 0.97 | 3.60 | 0.97 |
| | 71. Use deductive/inductive reasoning | 3.75 | 0.96 | 3.82 | 0.97 | 3.74 | 0.94 | 3.69 | 0.96 |
| | 72. Draw correct conclusions | 3.62 | 1.01 | 3.69 | 1.01 | 3.61 | 0.99 | 3.57 | 1.01 |
| | 73. Demonstrate ways to find answers | 3.98 | 0.90 | 4.05 | 0.90 | 3.95 | 0.90 | 3.94 | 0.89 |
| | 74. Demonstrate fundamental algorithm | 3.66 | 1.07 | 3.78 | 1.08 | 3.54 | 1.07 | 3.66 | 1.07 |
| † | 75. Use examples from history of math | 2.72 | 1.04 | 2.83 | 1.07 | 2.60 | 1.01 | 2.73 | 1.04 |
| | 76. Express key concept of math | 4.08 | 1.00 | 4.13 | 1.01 | 4.04 | 0.99 | 4.06 | 0.99 |
| | 77. Use calculator as tool | 4.09 | 0.96 | 4.06 | 0.98 | 4.18 | 0.92 | 4.05 | 0.97 |
| | 78. Use a variety of materials | 3.76 | 1.14 | 3.83 | 1.14 | 3.70 | 1.17 | 3.74 | 1.11 |

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| | TOTAL | | URBAN | | SUBURBAN | | RURAL | |
|---|---|---|---|---|---|---|---|---|
| **IV. LISTENING** | **Mean** | **S.D.** | **Mean** | **S.D.** | **Mean** | **S.D.** | **Mean** | **S.D.** |
| 79. Recall actual wording of message | 3.62 | 1.08 | 3.67 | 1.06 | 3.63 | 1.06 | 3.56 | 1.10 |
| 80. Recall & paraphrase spoken message | 4.35 | 0.75 | 4.37 | 0.74 | 4.41 | 0.70 | 4.28 | 0.79 |
| 81. Select info. in a spoken message | 4.29 | 0.74 | 4.30 | 0.77 | 4.31 | 0.70 | 4.24 | 0.74 |
| 82. Recognize a speaker's question | 4.59 | 0.62 | 4.62 | 0.63 | 4.65 | 0.55 | 4.52 | 0.67 |
| 83. Understand implied cont. in message | 4.13 | 0.76 | 4.17 | 0.78 | 4.16 | 0.74 | 4.07 | 0.76 |
| 84. Understand meaning of fig. of speech | 3.96 | 0.85 | 3.96 | 0.88 | 3.97 | 0.85 | 3.95 | 0.82 |
| 85. Interpret purp. of rhetorical device | 3.70 | 0.89 | 3.76 | 0.87 | 3.69 | 0.91 | 3.66 | 0.89 |
| 86. Recognize organiz.-spoken message | 3.76 | 0.91 | 3.82 | 0.93 | 3.78 | 0.90 | 3.68 | 0.90 |
| 87. Ident. main idea of message-directly | 4.63 | 0.62 | 4.63 | 0.64 | 4.67 | 0.58 | 4.59 | 0.65 |
| 88. Ident. main idea of mess-inferable | 4.27 | 0.74 | 4.32 | 0.76 | 4.29 | 0.74 | 4.21 | 0.73 |
| 89. Identify a speaker's purpose | 4.31 | 0.76 | 4.35 | 0.77 | 4.33 | 0.76 | 4.26 | 0.76 |
| 90. Recognize strength/weakness in logic | 3.95 | 0.80 | 4.02 | 0.80 | 3.98 | 0.78 | 3.87 | 0.81 |
| 91. Determine facts presented are relev. | 4.05 | 0.79 | 4.13 | 0.79 | 4.07 | 0.77 | 3.96 | 0.80 |
| 92. Determine statements are fact/opinion | 4.12 | 0.80 | 4.22 | 0.77 | 4.12 | 0.82 | 4.03 | 0.80 |
| 93. Identify basis of logical argument | 4.37 | 0.74 | 4.42 | 0.73 | 4.40 | 0.72 | 4.30 | 0.76 |
| 94. Identify assumption of log. argument | 3.86 | 0.83 | 3.94 | 0.83 | 3.89 | 0.80 | 3.75 | 0.85 |
| 95. Identify affective/emotional content | 3.81 | 0.86 | 3.92 | 0.86 | 3.80 | 0.84 | 3.71 | 0.88 |
| 96. Focus on a spoken message | 3.91 | 0.91 | 3.98 | 0.87 | 3.91 | 0.91 | 3.85 | 0.92 |
| 97. Understand oral instructions given | 4.59 | 0.63 | 4.61 | 0.62 | 4.61 | 0.61 | 4.55 | 0.66 |
| 98. Use cues such as pitch | 4.17 | 0.81 | 4.20 | 0.83 | 4.20 | 0.78 | 4.12 | 0.81 |
| 99. Recognize dialects of spoken English | 3.72 | 0.97 | 3.82 | 0.96 | 3.69 | 0.99 | 3.65 | 0.95 |
| †100. Understand spoken English dialects | 3.47 | 0.96 | 3.59 | 0.97 | 3.40 | 0.98 | 3.44 | 0.93 |
| **V. SPEAKING** | | | | | | | | |
| 101. Enunciate words | 4.64 | 0.60 | 4.67 | 0.60 | 4.66 | 0.57 | 4.61 | 0.62 |
| 102. Speak in a fluent manner | 4.44 | 0.71 | 4.49 | 0.68 | 4.45 | 0.69 | 4.39 | 0.74 |
| 103. Speak at rate to be understood | 4.61 | 0.59 | 4.63 | 0.58 | 4.63 | 0.58 | 4.58 | 0.61 |
| 104. Speak loudly to be heard | 4.67 | 0.57 | 4.70 | 0.55 | 4.70 | 0.55 | 4.63 | 0.59 |
| 105. Use tone of voice to convey message | 4.39 | 0.71 | 4.45 | 0.71 | 4.38 | 0.70 | 4.36 | 0.71 |

| | TOTAL | | URBAN | | SUBURBAN | | RURAL | |
|---|---|---|---|---|---|---|---|---|
| V. SPEAKING (cont'd) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 106. Place stress appropriately | 4.42 | 0.69 | 4.47 | 0.67 | 4.43 | 0.68 | 4.38 | 0.72 |
| 107. Use eye contact | 4.53 | 0.67 | 4.56 | 0.65 | 4.55 | 0.66 | 4.49 | 0.70 |
| 108. Use grammatical structure correctly | 4.59 | 0.64 | 4.68 | 0.58 | 4.58 | 0.63 | 4.54 | 0.69 |
| 109. Adjust grammatical complexity | 4.40 | 0.76 | 4.42 | 0.79 | 4.44 | 0.70 | 4.34 | 0.79 |
| 110. Demonstrate basic working vocabulary | 4.54 | 0.64 | 4.58 | 0.61 | 4.56 | 0.61 | 4.49 | 0.67 |
| 111. Recognize message not understood | 4.64 | 0.59 | 4.68 | 0.55 | 4.66 | 0.57 | 4.59 | 0.61 |
| 112. Supply synonym for a word | 4.53 | 0.65 | 4.59 | 0.62 | 4.55 | 0.63 | 4.46 | 0.69 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.66 | 4.52 | 0.64 | 4.52 | 0.65 | 4.44 | 0.70 |
| 114. Adjust to unexpected change | 4.19 | 0.79 | 4.26 | 0.78 | 4.18 | 0.79 | 4.15 | 0.80 |
| 115. Use spoken lang. for variety of purp. | 4.49 | 0.67 | 4.52 | 0.66 | 4.52 | 0.66 | 4.42 | 0.70 |
| 116. Speak concisely and to the point | 4.53 | 0.63 | 4.56 | 0.62 | 4.52 | 0.63 | 4.51 | 0.64 |
| 117. Read aloud with intonation | 4.38 | 0.73 | 4.44 | 0.70 | 4.35 | 0.75 | 4.36 | 0.74 |
| VI. INTERACTIVE COMMUNICATION SKILLS | | | | | | | | |
| 118. Get a listener's attention | 4.57 | 0.63 | 4.62 | 0.61 | 4.57 | 0.62 | 4.54 | 0.66 |
| 119. Give verbal/non-verbal feedback | 4.26 | 0.76 | 4.31 | 0.76 | 4.24 | 0.77 | 4.22 | 0.75 |
| 120. Exercise good judgment-oral interaction | 4.32 | 0.72 | 4.37 | 0.72 | 4.32 | 0.71 | 4.29 | 0.73 |
| 121. Direct verbal interaction | 4.19 | 0.76 | 4.22 | 0.76 | 4.17 | 0.76 | 4.17 | 0.78 |
| 122. Adapt to a variety of comm. situations | 4.21 | 0.75 | 4.28 | 0.73 | 4.19 | 0.75 | 4.18 | 0.76 |
| 123. Request clarification of spoken mess. | 4.41 | 0.69 | 4.45 | 0.67 | 4.42 | 0.69 | 4.38 | 0.71 |
| 124. Be aware of listener's non-verbal cues | 4.24 | 0.74 | 4.31 | 0.72 | 4.23 | 0.72 | 4.20 | 0.76 |
| 125. Be aware of one own non-verbal cues | 4.31 | 0.73 | 4.37 | 0.71 | 4.29 | 0.72 | 4.27 | 0.75 |
| 126. Respond to listener's signs | 4.48 | 0.66 | 4.48 | 0.66 | 4.49 | 0.66 | 4.46 | 0.65 |
| 127. Match spoken mess. to audience level | 4.41 | 0.69 | 4.43 | 0.70 | 4.43 | 0.66 | 4.36 | 0.71 |
| 128. Refrain from interruptions | 4.31 | 0.74 | 4.35 | 0.72 | 4.27 | 0.75 | 4.30 | 0.74 |
| 129. Listen to speaker and summarize ideas | 4.27 | 0.74 | 4.27 | 0.75 | 4.26 | 0.72 | 4.26 | 0.75 |
| 130. Listen to two speakers and compare | 3.98 | 0.84 | 4.03 | 0.86 | 3.96 | 0.81 | 3.94 | 0.84 |

| VI. INTERACTIVE COMMUNICATION SKILLS (cont'd) | TOTAL | | URBAN | | SUBURBAN | | RURAL | |
|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 131. Listen to someone describe situation | 3.79 | 0.87 | 3.85 | 0.89 | 3.78 | 0.83 | 3.73 | 0.88 |
| 132. Obtain information from diff. resources | 4.14 | 0.81 | 4.21 | 0.82 | 4.15 | 0.80 | 4.09 | 0.81 |
| 133. Listen to a disc. and evaluate logic | 4.25 | 0.76 | 4.29 | 0.74 | 4.27 | 0.75 | 4.20 | 0.78 |
| 134. Observe/describe an incident | 4.00 | 0.83 | 4.05 | 0.85 | 4.02 | 0.81 | 3.95 | 0.84 |

Appendix N

Primary Teacher Respondents: Mean Ratings by School Level

| | | TOTAL N=2269 | | ELEMEN. N=647 | | MIDDLE N=653 | | SECOND. N=897 | |
|---|---|---|---|---|---|---|---|---|---|
| L | READING | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| | 1. Determine main idea | 4.77 | 0.49 | 4.77 | 0.50 | 4.77 | 0.51 | 4.77 | 0.47 |
| | 2. Locate important ideas | 4.62 | 0.60 | 4.62 | 0.60 | 4.63 | 0.60 | 4.62 | 0.59 |
| | 3. Identify accurate paraphrases | 4.30 | 0.78 | 4.30 | 0.78 | 4.30 | 0.80 | 4.31 | 0.77 |
| | 4. Determine supporting ideas | 4.35 | 0.75 | 4.46 | 0.69 | 4.34 | 0.78 | 4.28 | 0.76 |
| | 5. Recognize an argument | 4.20 | 0.81 | 4.07 | 0.87 | 4.23 | 0.81 | 4.27 | 0.77 |
| | 6. Determine facts/ideas | 4.25 | 0.78 | 4.14 | 0.84 | 4.27 | 0.75 | 4.32 | 0.76 |
| | 7. Identify strength/weakness | 3.94 | 0.86 | 3.83 | 0.90 | 3.98 | 0.83 | 3.99 | 0.85 |
| | 8. Recognize techniques | 3.73 | 0.93 | 3.76 | 0.94 | 3.80 | 0.89 | 3.66 | 0.94 |
| | 9. Recognize elements | 4.04 | 0.84 | 4.03 | 0.85 | 4.06 | 0.83 | 4.03 | 0.84 |
| | 10. Identify logical assumptions | 3.93 | 0.84 | 3.85 | 0.86 | 3.92 | 0.83 | 3.99 | 0.84 |
| | 11. Recognize point of view | 4.06 | 0.83 | 4.05 | 0.82 | 4.08 | 0.82 | 4.05 | 0.84 |
| | 12. Perceive what is implied | 4.00 | 0.83 | 4.05 | 0.82 | 4.01 | 0.82 | 3.96 | 0.84 |
| | 13. Recognize attitude expressed | 3.86 | 0.86 | 3.85 | 0.85 | 3.88 | 0.84 | 3.85 | 0.87 |
| † | 14. Recognize style | 3.37 | 0.92 | 3.52 | 0.89 | 3.39 | 0.90 | 3.25 | 0.93 |
| | 15. Distinguish facts/opinion | 4.39 | 0.78 | 4.39 | 0.79 | 4.40 | 0.78 | 4.38 | 0.78 |
| | 16. Recognize ideas/situations | 3.78 | 0.86 | 3.91 | 0.87 | 3.78 | 0.85 | 3.70 | 0.86 |
| | 17. Determine author's purpose | 3.78 | 0.99 | 3.89 | 0.98 | 3.77 | 0.97 | 3.71 | 1.01 |
| | 18. Understand reading selections | 3.77 | 0.91 | 3.86 | 0.88 | 3.79 | 0.91 | 3.69 | 0.91 |
| | 19. Use table of contents | 4.69 | 0.61 | 4.71 | 0.57 | 4.70 | 0.62 | 4.67 | 0.61 |
| | 20. Arrange ideas in reading selection | 4.02 | 0.90 | 4.04 | 0.89 | 4.06 | 0.89 | 3.98 | 0.91 |
| | 21. Identify relationships | 4.05 | 0.81 | 4.19 | 0.75 | 4.03 | 0.83 | 3.98 | 0.83 |
| | 22. Determine implied relationships | 3.97 | 0.83 | 3.99 | 0.81 | 4.00 | 0.84 | 3.94 | 0.84 |
| | 23. Locate place in reading selection | 4.12 | 0.91 | 4.20 | 0.87 | 4.19 | 0.91 | 4.04 | 0.90 |
| | 24. Recognize different interpretations | 3.99 | 0.83 | 4.02 | 0.83 | 4.00 | 0.82 | 3.97 | 0.82 |
| | 25. Identify what author assumes | 3.69 | 0.89 | 3.68 | 0.91 | 3.73 | 0.88 | 3.67 | 0.87 |
| | 26. Recognize meaning of word | 4.25 | 0.78 | 4.36 | 0.74 | 4.29 | 0.77 | 4.15 | 0.81 |
| | 27. Determine meaning of figuration | 3.93 | 0.87 | 4.10 | 0.84 | 3.92 | 0.85 | 3.82 | 0.88 |
| | 28. Understand function-key transit. | 3.93 | 0.88 | 3.97 | 0.87 | 3.96 | 0.85 | 3.88 | 0.89 |

†Mean of less than 3.50 for one or more respondent subgroups



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| | TOTAL | | ELEMEN. | | MIDDLE | | SECOND. | |
|---|---|---|---|---|---|---|---|---|
| I. READING (cont'd) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 29. Compare/combine ideas | 4.16 | 0.81 | 4.12 | 0.82 | 4.19 | 0.81 | 4.15 | 0.81 |
| 30. Identify inconsistencies | 4.03 | 0.85 | 3.96 | 0.89 | 4.04 | 0.83 | 4.08 | 0.81 |
| 31. Specify appropriate reference source | 4.43 | 0.77 | 4.52 | 0.70 | 4.48 | 0.73 | 4.35 | 0.81 |
| 32. Understand reading materials | 3.94 | 0.87 | 4.02 | 0.84 | 3.94 | 0.85 | 3.88 | 0.89 |
| II. WRITING | | | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.67 | 4.49 | 0.67 | 4.48 | 0.65 | 4.40 | 0.68 |
| 34. Delineate steps in a process | 4.59 | 0.61 | 4.58 | 0.61 | 4.61 | 0.61 | 4.59 | 0.62 |
| 35. Support a position | 4.26 | 0.76 | 4.21 | 0.79 | 4.28 | 0.74 | 4.27 | 0.75 |
| 36. Analyze ideas | 4.33 | 0.72 | 4.27 | 0.74 | 4.35 | 0.73 | 4.36 | 0.69 |
| 37. Provide a clear focus | 4.33 | 0.76 | 4.23 | 0.80 | 4.37 | 0.73 | 4.37 | 0.75 |
| 38. Produce/develop supp. materials | 4.28 | 0.75 | 4.24 | 0.79 | 4.31 | 0.72 | 4.28 | 0.75 |
| 39. Organize ideas | 4.61 | 0.59 | 4.62 | 0.60 | 4.62 | 0.60 | 4.60 | 0.58 |
| 40. Use vocabulary appropriatly | 4.57 | 0.63 | 4.59 | 0.61 | 4.59 | 0.61 | 4.53 | 0.64 |
| 41. Present ideas in writing | 3.78 | 0.87 | 3.92 | 0.85 | 3.81 | 0.83 | 3.66 | 0.90 |
| 42. Present alternative points | 3.82 | 0.85 | 3.86 | 0.83 | 3.87 | 0.84 | 3.76 | 0.88 |
| 43. Produce writing free of errors | 4.53 | 0.70 | 4.61 | 0.68 | 4.54 | 0.69 | 4.47 | 0.72 |
| 44. Recognize basic grammatical errors | 4.66 | 0.62 | 4.78 | 0.52 | 4.66 | 0.60 | 4.58 | 0.68 |
| 45. Recognize effective sentence structure | 4.22 | 0.81 | 4.29 | 0.85 | 4.21 | 0.78 | 4.17 | 0.81 |
| 46. Recognize inappropriate language | 4.18 | 0.81 | 4.22 | 0.83 | 4.20 | 0.79 | 4.14 | 0.80 |
| 47. Revise sentences | 4.56 | 0.68 | 4.66 | 0.61 | 4.55 | 0.68 | 4.49 | 0.71 |
| 48. Revise paragraphs to create | 4.22 | 0.77 | 4.27 | 0.80 | 4.27 | 0.73 | 4.15 | 0.77 |
| 49. Revise paragraphs to clarify | 4.22 | 0.77 | 4.24 | 0.77 | 4.25 | 0.76 | 4.18 | 0.76 |
| III. MATHEMATICS | | | | | | | | |
| 50. Recognize position of numbers | 4.36 | 0.79 | 4.45 | 0.75 | 4.37 | 0.77 | 4.30 | 0.84 |
| 51. Recognize equivalent forms | 4.26 | 0.84 | 4.32 | 0.79 | 4.28 | 0.83 | 4.21 | 0.87 |
| 52. Solve problems | 4.20 | 0.81 | 4.28 | 0.77 | 4.24 | 0.80 | 4.13 | 0.83 |

| | TOTAL | | ELEMEN. | | MIDDLE | | SECOND. | |
|---|---|---|---|---|---|---|---|---|
| III. MATHEMATICS (cont'd) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 53. Use appropriate form of number | 4.18 | 0.81 | 4.28 | 0.76 | 4.18 | 0.83 | 4.11 | 0.82 |
| 54. Demonstrate charact. of counting #'s | 4.00 | 0.94 | 4.18 | 0.84 | 4.00 | 0.93 | 3.88 | 0.98 |
| 55. Interpret and apply ratio | 4.01 | 0.87 | 3.96 | 0.88 | 4.03 | 0.86 | 4.04 | 0.88 |
| 56. Perform computations | 4.67 | 0.62 | 4.75 | 0.54 | 4.68 | 0.61 | 4.60 | 0.67 |
| 57. Read/interpret various graphs | 4.40 | 0.76 | 4.51 | 0.69 | 4.46 | 0.71 | 4.28 | 0.82 |
| 58. Recognize numerical data | 3.92 | 0.89 | 3.85 | 0.90 | 3.95 | 0.87 | 3.94 | 0.90 |
| 59. Demonstrate ability to analyze | 3.85 | 0.87 | 3.82 | 0.87 | 3.87 | 0.88 | 3.85 | 0.86 |
| 60. Interpret Mean, Median, Mode | 3.56 | 0.95 | 3.53 | 0.95 | 3.60 | 0.94 | 3.55 | 0.95 |
| † 61. Interpret Range, Variance, S.D. | 3.22 | 0.96 | 3.26 | 0.95 | 3.22 | 0.98 | 3.19 | 0.95 |
| 62. Select sequence of operations | 4.04 | 0.87 | 4.21 | 0.79 | 4.03 | 0.89 | 3.92 | 0.89 |
| † 63. Recognize relationships among variables | 3.20 | 1.07 | 3.10 | 1.04 | 3.21 | 1.05 | 3.26 | 1.10 |
| 64. Solve simple equations | 4.14 | 0.98 | 4.35 | 0.88 | 4.15 | 0.94 | 3.99 | 1.04 |
| † 65. Write equations using variables | 3.51 | 1.05 | 3.58 | 1.03 | 3.55 | 1.02 | 3.42 | 1.07 |
| † 66. Recognize patterns | 3.36 | 1.04 | 3.53 | 1.02 | 3.31 | 1.01 | 3.27 | 1.06 |
| † 67. Use formulas for determining length | 3.52 | 1.07 | 3.63 | 1.01 | 3.57 | 1.08 | 3.41 | 1.09 |
| 68. Use various systems of measurement | 3.64 | 1.04 | 3.67 | 1.05 | 3.68 | 1.01 | 3.60 | 1.07 |
| 69. Convert units - measurement system | 3.57 | 1.06 | 3.57 | 1.04 | 3.59 | 1.08 | 3.56 | 1.06 |
| 70. Interpret logical connectives | 3.67 | 0.98 | 3.72 | 0.99 | 3.68 | 0.97 | 3.62 | 0.98 |
| 71. Use deductive/inductive reasoning | 3.75 | 0.96 | 3.71 | 0.97 | 3.75 | 0.93 | 3.76 | 0.97 |
| 72. Draw correct conclusions | 3.62 | 1.01 | 3.55 | 1.01 | 3.65 | 0.98 | 3.64 | 1.03 |
| 73. Demonstrate ways to find answers | 3.98 | 0.90 | 4.09 | 0.87 | 4.02 | 0.85 | 3.86 | 0.93 |
| † 74. Demonstrate fundamental algorithms | 3.66 | 1.07 | 3.96 | 0.97 | 3.67 | 1.06 | 3.42 | 1.09 |
| † 75. Use examples from history of math | 2.72 | 1.04 | 2.80 | 1.04 | 2.76 | 1.05 | 2.63 | 1.02 |
| 76. Express key concept of math | 4.08 | 1.00 | 4.35 | 0.87 | 4.10 | 0.94 | 3.87 | 1.06 |
| 77. Use calculator as tool | 4.09 | 0.96 | 4.02 | 0.97 | 4.14 | 0.93 | 4.11 | 0.96 |
| † 78. Use a variety of materials | 3.76 | 1.14 | 4.33 | 0.90 | 3.76 | 1.09 | 3.36 | 1.16 |

| | TOTAL | | ELEMEN. | | MIDDLE | | SECOND. | |
|---|---|---|---|---|---|---|---|---|
| **IV. LISTENING** | **Mean** | **S.D.** | **Mean** | **S.D.** | **Mean** | **S.D.** | **Mean** | **S.D.** |
| 79. Recall actual wording of message | 3.62 | 1.08 | 3.63 | 1.08 | 3.61 | 1.08 | 3.62 | 1.07 |
| 80. Recall & paraphrase spoken message | 4.35 | 0.75 | 4.35 | 0.79 | 4.35 | 0.73 | 4.38 | 0.72 |
| 81. Select info. in a spoken message | 4.29 | 0.74 | 4.30 | 0.77 | 4.27 | 0.73 | 4.29 | 0.71 |
| 82. Recognize a speaker's question | 4.59 | 0.62 | 4.60 | 0.66 | 4.60 | 0.60 | 4.59 | 0.59 |
| 83. Understand implied cont. in message | 4.13 | 0.76 | 4.08 | 0.80 | 4.16 | 0.74 | 4.15 | 0.74 |
| 84. Understand meaning of fig. of speech | 3.96 | 0.85 | 4.01 | 0.83 | 3.96 | 0.85 | 3.91 | 0.86 |
| 85. Interpret purp. of rhetorical device | 3.70 | 0.89 | 3.68 | 0.90 | 3.75 | 0.88 | 3.67 | 0.89 |
| 86. Recognize organiz.-spoken message | 3.76 | 0.91 | 3.79 | 0.94 | 3.78 | 0.89 | 3.73 | 0.89 |
| 87. Ident. main idea of message-directly | 4.63 | 0.62 | 4.63 | 0.65 | 4.65 | 0.60 | 4.63 | 0.62 |
| 88. Ident. main idea of mess-inferable | 4.27 | 0.74 | 4.31 | 0.77 | 4.24 | 0.74 | 4.26 | 0.73 |
| 89. Identify a speaker's purpose | 4.31 | 0.76 | 4.33 | 0.78 | 4.34 | 0.76 | 4.29 | 0.76 |
| 90. Recognize strength/weakness in logic | 3.95 | 0.80 | 3.87 | 0.85 | 3.95 | 0.77 | 4.01 | 0.79 |
| 91. Determine facts presented are relev. | 4.05 | 0.79 | 3.97 | 0.84 | 4.06 | 0.78 | 4.10 | 0.76 |
| 92. Determine statements are fact/opinion | 4.12 | 0.80 | 4.04 | 0.86 | 4.11 | 0.80 | 4.18 | 0.75 |
| 93. Identify basis of logical argument | 4.37 | 0.74 | 4.36 | 0.77 | 4.42 | 0.71 | 4.35 | 0.74 |
| 94. Identify assumption of log. argument | 3.86 | 0.83 | 3.78 | 0.87 | 3.86 | 0.81 | 3.91 | 0.82 |
| 95. Identify affective/emotional content | 3.81 | 0.86 | 3.77 | 0.88 | 3.82 | 0.85 | 3.82 | 0.86 |
| 96. Focus on a spoken message | 3.91 | 0.91 | 3.91 | 0.95 | 3.91 | 0.87 | 3.91 | 0.91 |
| 97. Understand oral instructions given | 4.59 | 0.63 | 4.59 | 0.64 | 4.61 | 0.62 | 4.58 | 0.63 |
| 98. Use cues such as pitch | 4.17 | 0.81 | 4.20 | 0.81 | 4.19 | 0.80 | 4.16 | 0.80 |
| 99. Recognize dialects of spoken English | 3.72 | 0.97 | 3.81 | 0.92 | 3.71 | 0.97 | 3.66 | 0.99 |
| †100. Understand spoken English dialects | 3.47 | 0.96 | 3.56 | 0.95 | 3.50 | 0.94 | 3.39 | 0.98 |
| **V. SPEAKING** | | | | | | | | |
| 101. Enunciate words | 4.64 | 0.60 | 4.68 | 0.59 | 4.65 | 0.58 | 4.62 | 0.61 |
| 102. Speak in a fluent manner | 4.44 | 0.71 | 4.50 | 0.69 | 4.43 | 0.71 | 4.41 | 0.72 |
| 103. Speak at rate to be understood | 4.61 | 0.59 | 4.64 | 0.58 | 4.62 | 0.59 | 4.58 | 0.60 |
| 104. Speak loudly to be heard | 4.67 | 0.57 | 4.68 | 0.59 | 4.69 | 0.56 | 4.66 | 0.56 |
| 105. Use tone of voice to convey message | 4.39 | 0.71 | 4.42 | 0.72 | 4.44 | 0.65 | 4.35 | 0.73 |

| V. SPEAKING (cont'd) | TOTAL Mean | TOTAL S.D. | ELEMEN. Mean | ELEMEN. S.D. | MIDDLE Mean | MIDDLE S.D. | SECOND. Mean | SECOND. S.D. |
|---|---|---|---|---|---|---|---|---|
| 106. Place stress appropriately | 4.42 | 0.69 | 4.43 | 0.71 | 4.48 | 0.65 | 4.38 | 0.71 |
| 107. Use eye contact | 4.53 | 0.67 | 4.55 | 0.68 | 4.57 | 0.62 | 4.50 | 0.70 |
| 108. Use grammatical structure correctly | 4.59 | 0.64 | 4.70 | 0.58 | 4.59 | 0.63 | 4.51 | 0.67 |
| 109. Adjust grammatical complexity | 4.40 | 0.76 | 4.43 | 0.78 | 4.45 | 0.70 | 4.35 | 0.78 |
| 110. Demonstrate basic working vocabulary | 4.54 | 0.64 | 4.59 | 0.64 | 4.56 | 0.62 | 4.50 | 0.65 |
| 111. Recognize message not understood | 4.64 | 0.59 | 4.65 | 0.61 | 4.64 | 0.58 | 4.64 | 0.58 |
| 112. Supply synonym for a word | 4.53 | 0.65 | 4.58 | 0.64 | 4.54 | 0.62 | 4.50 | 0.66 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.66 | 4.55 | 0.65 | 4.55 | 0.62 | 4.41 | 0.70 |
| 114. Adjust to unexpected change | 4.19 | 0.79 | 4.24 | 0.76 | 4.25 | 0.76 | 4.13 | 0.82 |
| 115. Use spoken lang. for variety of purp. | 4.49 | 0.67 | 4.52 | 0.66 | 4.51 | 0.67 | 4.46 | 0.68 |
| 116. Speak concisely and to the point | 4.53 | 0.63 | 4.54 | 0.62 | 4.54 | 0.65 | 4.52 | 0.62 |
| 117. Read aloud with intonation | 4.38 | 0.73 | 4.52 | 0.68 | 4.40 | 0.68 | 4.27 | 0.78 |
| VI. INTERACTIVE COMMUNICATION SKILLS | | | | | | | | |
| 118. Get a listener's attention | 4.57 | 0.63 | 4.64 | 0.61 | 4.59 | 0.61 | 4.52 | 0.65 |
| 119. Give verbal/non-verbal feedback | 4.26 | 0.76 | 4.30 | 0.75 | 4.28 | 0.74 | 4.22 | 0.77 |
| 120. Exercise good judgment-oral interaction | 4.32 | 0.72 | 4.34 | 0.75 | 4.32 | 0.70 | 4.32 | 0.71 |
| 121. Direct verbal interaction | 4.19 | 0.76 | 4.21 | 0.80 | 4.19 | 0.77 | 4.18 | 0.73 |
| 122. Adapt to a variety of comm. situations | 4.21 | 0.75 | 4.24 | 0.75 | 4.23 | 0.74 | 4.18 | 0.75 |
| 123. Request clarification of spoken mess. | 4.41 | 0.69 | 4.41 | 0.71 | 4.40 | 0.70 | 4.43 | 0.67 |
| 124. Be aware of listener's non-verbal cues | 4.24 | 0.74 | 4.27 | 0.73 | 4.25 | 0.74 | 4.22 | 0.74 |
| 125. Be aware of one own non-verbal cues | 4.31 | 0.73 | 4.33 | 0.72 | 4.31 | 0.72 | 4.28 | 0.74 |
| 126. Respond to listener's signs | 4.48 | 0.66 | 4.50 | 0.66 | 4.48 | 0.67 | 4.48 | 0.65 |
| 127. Match spoken mess. to audience level | 4.41 | 0.69 | 4.45 | 0.70 | 4.42 | 0.67 | 4.37 | 0.69 |
| 128. Refrain from interruptions | 4.31 | 0.74 | 4.31 | 0.77 | 4.31 | 0.73 | 4.31 | 0.72 |
| 129. Listen to speaker and summarize ideas | 4.27 | 0.74 | 4.27 | 0.76 | 4.27 | 0.73 | 4.27 | 0.73 |
| 130. Listen to two speakers and compare | 3.98 | 0.84 | 3.93 | 0.88 | 3.99 | 0.82 | 4.00 | 0.81 |

| VI. INTERACTIVE COMMUNICATION SKILLS (cont'd) | TOTAL | | ELEMEN. | | MIDDLE | | SECOND. | |
|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 131. Listen to someone describe situation | 3.79 | 0.87 | 3.69 | 0.94 | 3.84 | 0.84 | 3.81 | 0.82 |
| 132. Obtain information from diff. resources | 4.14 | 0.81 | 4.07 | 0.86 | 4.19 | 0.80 | 4.17 | 0.78 |
| 133. Listen to a disc. and evaluate logic | 4.25 | 0.76 | 4.21 | 0.82 | 4.25 | 0.76 | 4.29 | 0.72 |
| 134. Observe/describe an incident | 4.00 | 0.83 | 3.96 | 0.87 | 4.07 | 0.81 | 3.98 | 0.82 |

Appendix O

States Within Each of the Four NASDTEC Geographic Regions

**FAR WEST**

Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
New Mexico
Nevada
Oregon
Utah
Washington
Wyoming

**SOUTHERN**

Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Texas
Virginia
West Virginia

**CENTRAL**

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
Oklahoma
South Dakota
Wisconsin

**NORTHEAST**

Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Appendix P

Primary Teacher Respondents: Mean Ratings by Region

| | TOTAL N=2289 | | FAR WEST N=580 | | SOUTHERN N=558 | | CENTRAL N=593 | | NORTHEAST N=515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| L READING | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D |
| 1. Determine main idea | 4.77 | 0.49 | 4.74 | 0.50 | 4.78 | 0.46 | 4.75 | 0.53 | 4.82 | 0.45 |
| 2. Locate important ideas | 4.62 | 0.60 | 4.57 | 0.62 | 4.63 | 0.57 | 4.60 | 0.63 | 4.71 | 0.53 |
| 3. Identify accurate paraphrases | 4.30 | 0.78 | 4.24 | 0.81 | 4.36 | 0.72 | 4.21 | 0.82 | 4.42 | 0.73 |
| 4. Determine supporting ideas | 4.35 | 0.75 | 4.28 | 0.77 | 4.40 | 0.72 | 4.25 | 0.77 | 4.50 | 0.69 |
| 5. Recognize an argument | 4.20 | 0.81 | 4.17 | 0.81 | 4.15 | 0.81 | 4.16 | 0.84 | 4.34 | 0.78 |
| 6. Determine facts/ideas | 4.25 | 0.78 | 4.24 | 0.79 | 4.24 | 0.77 | 4.15 | 0.82 | 4.40 | 0.74 |
| 7. Identify strength/weakness | 3.94 | 0.86 | 3.91 | 0.88 | 3.96 | 0.85 | 3.84 | 0.87 | 4.07 | 0.83 |
| 8. Recognize techniques | 3.73 | 0.93 | 3.68 | 0.95 | 3.75 | 0.93 | 3.64 | 0.94 | 3.87 | 0.89 |
| 9. Recognize elements | 4.04 | 0.84 | 4.01 | 0.86 | 4.03 | 0.84 | 3.99 | 0.86 | 4.14 | 0.80 |
| 10. Identify logical assumptions | 3.93 | 0.84 | 3.90 | 0.85 | 3.91 | 0.84 | 3.84 | 0.87 | 4.07 | 0.79 |
| 11. Recognize point of view | 4.06 | 0.83 | 4.00 | 0.84 | 4.07 | 0.81 | 4.00 | 0.87 | 4.19 | 0.77 |
| 12. Perceive what is implied | 4.00 | 0.83 | 3.95 | 0.86 | 4.02 | 0.80 | 3.92 | 0.84 | 4.13 | 0.81 |
| 13. Recognize attitude expressed | 3.86 | 0.86 | 3.80 | 0.86 | 3.89 | 0.84 | 3.81 | 0.86 | 3.96 | 0.85 |
| † 14. Recognize style | 3.37 | 0.92 | 3.26 | 0.91 | 3.48 | 0.87 | 3.27 | 0.93 | 3.50 | 0.93 |
| 15. Distinguish facts/opinion | 4.38 | 0.78 | 4.36 | 0.78 | 4.42 | 0.74 | 4.32 | 0.84 | 4.45 | 0.76 |
| 16. Recognize ideas/situations | 3.78 | 0.86 | 3.77 | 0.92 | 3.80 | 0.82 | 3.70 | 0.87 | 3.88 | 0.83 |
| 17. Determine author's purpose | 3.78 | 0.99 | 3.72 | 1.03 | 3.87 | 0.96 | 3.66 | 1.00 | 3.89 | 0.94 |
| 18. Understand reading selections | 3.77 | 0.91 | 3.70 | 0.91 | 3.88 | 0.90 | 3.67 | 0.92 | 3.87 | 0.89 |
| 19. Use table of contents | 4.68 | 0.61 | 4.68 | 0.59 | 4.70 | 0.59 | 4.67 | 0.63 | 4.70 | 0.60 |
| 20. Arrange ideas in reading selection | 4.02 | 0.90 | 3.97 | 0.93 | 4.02 | 0.91 | 4.04 | 0.90 | 4.09 | 0.87 |



† Mean of less than 3.50 for one or more respondent subgroups

| | TOTAL | | FAR WEST | | SOUTHERN | | CENTRAL | | NORTHEAST | |
|---|---|---|---|---|---|---|---|---|---|---|
| I. READING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 21. Identify relationships | 4.05 | 0.81 | 4.02 | 0.84 | 4.09 | 0.79 | 3.95 | 0.83 | 4.18 | 0.77 |
| 22. Determine implied relationships | 3.97 | 0.83 | 3.90 | 0.87 | 4.00 | 0.79 | 3.90 | 0.85 | 4.10 | 0.78 |
| 23. Locate place in reading selection | 4.12 | 0.91 | 4.01 | 0.97 | 4.18 | 0.86 | 4.08 | 0.91 | 4.27 | 0.84 |
| 24. Recognize different interpretations | 3.99 | 0.83 | 3.90 | 0.88 | 4.07 | 0.79 | 3.90 | 0.82 | 4.14 | 0.77 |
| 25. Identify what author assumes | 3.69 | 0.89 | 3.63 | 0.92 | 3.77 | 0.87 | 3.59 | 0.88 | 3.79 | 0.86 |
| 26. Recognize meaning of word | 4.25 | 0.78 | 4.18 | 0.80 | 4.32 | 0.75 | 4.21 | 0.83 | 4.31 | 0.75 |
| 27. Determine meaning of figuration | 3.93 | 0.87 | 3.93 | 0.85 | 4.06 | 0.83 | 3.81 | 0.89 | 3.95 | 0.88 |
| 28. Understand function-key transit. | 3.93 | 0.88 | 3.88 | 0.89 | 4.03 | 0.86 | 3.83 | 0.88 | 4.00 | 0.86 |
| 29. Compare/combine ideas | 4.15 | 0.81 | 4.16 | 0.81 | 4.14 | 0.82 | 4.10 | 0.84 | 4.24 | 0.78 |
| 30. Identify inconsistencies | 4.03 | 0.85 | 4.04 | 0.87 | 4.03 | 0.85 | 3.97 | 0.83 | 4.12 | 0.82 |
| 31. Specify appropriate reference source | 4.43 | 0.77 | 4.41 | 0.76 | 4.47 | 0.77 | 4.41 | 0.77 | 4.47 | 0.74 |
| 32. Understand reading materials | 3.94 | 0.87 | 3.89 | 0.89 | 4.01 | 0.85 | 3.82 | 0.92 | 4.08 | 0.76 |
| II. WRITING | | | | | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.67 | 4.45 | 0.65 | 4.47 | 0.65 | 4.40 | 0.71 | 4.50 | 0.65 |
| 34. Delineate steps in a process | 4.59 | 0.61 | 4.57 | 0.59 | 4.61 | 0.61 | 4.56 | 0.67 | 4.64 | 0.58 |
| 35. Support a position | 4.26 | 0.76 | 4.21 | 0.78 | 4.30 | 0.76 | 4.20 | 0.77 | 4.32 | 0.73 |
| 36. Analyze ideas | 4.33 | 0.72 | 4.29 | 0.74 | 4.35 | 0.72 | 4.28 | 0.74 | 4.42 | 0.64 |
| 37. Provide a clear focus | 4.33 | 0.76 | 4.30 | 0.76 | 4.38 | 0.77 | 4.24 | 0.80 | 4.42 | 0.70 |
| 38. Produce/develop supp. materials | 4.28 | 0.75 | 4.27 | 0.74 | 4.32 | 0.76 | 4.20 | 0.79 | 4.32 | 0.71 |
| 39. Organize ideas | 4.61 | 0.59 | 4.60 | 0.60 | 4.62 | 0.56 | 4.57 | 0.64 | 4.66 | 0.55 |
| 40. Use vocabulary appropriately | 4.56 | 0.63 | 4.52 | 0.66 | 4.60 | 0.58 | 4.52 | 0.68 | 4.63 | 0.59 |
| 41. Present ideas in writing | 3.78 | 0.87 | 3.72 | 0.89 | 3.84 | 0.83 | 3.71 | 0.89 | 3.87 | 0.87 |
| 42. Present alternative points | 3.82 | 0.85 | 3.80 | 0.88 | 3.85 | 0.83 | 3.72 | 0.86 | 3.94 | 0.82 |



BEST COPY AVAILABLE

| | TOTAL | | FAR WEST | | SOUTHERN | | CENTRAL | | NORTHEAST | |
|---|---|---|---|---|---|---|---|---|---|---|
| II. WRITING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 43. Produce writing free of errors | 4.53 | 0.70 | 4.44 | 0.72 | 4.69 | 0.57 | 4.47 | 0.76 | 4.52 | 0.72 |
| 44. Recognize basic grammatical errors | 4.65 | 0.62 | 4.59 | 0.66 | 4.81 | 0.45 | 4.58 | 0.68 | 4.66 | 0.63 |
| 45. Recognize effective sentence structure | 4.22 | 0.81 | 4.10 | 0.84 | 4.36 | 0.77 | 4.14 | 0.82 | 4.28 | 0.80 |
| 46. Recognize inappropriate language | 4.18 | 0.81 | 4.09 | 0.84 | 4.29 | 0.79 | 4.09 | 0.81 | 4.29 | 0.77 |
| 47. Revise sentences | 4.55 | 0.68 | 4.45 | 0.72 | 4.67 | 0.61 | 4.52 | 0.72 | 4.60 | 0.64 |
| 48. Revise paragraphs to create | 4.22 | 0.77 | 4.15 | 0.79 | 4.31 | 0.76 | 4.13 | 0.79 | 4.31 | 0.71 |
| 49. Revise paragraphs to clarify | 4.22 | 0.77 | 4.16 | 0.77 | 4.32 | 0.76 | 4.11 | 0.81 | 4.30 | 0.72 |
| III. MATHEMATICS | | | | | | | | | | |
| 50. Recognize position of numbers | 4.36 | 0.79 | 4.30 | 0.82 | 4.43 | 0.76 | 4.36 | 0.80 | 4.37 | 0.79 |
| 51. Recognize equivalent forms | 4.26 | 0.84 | 4.22 | 0.82 | 4.35 | 0.79 | 4.23 | 0.87 | 4.25 | 0.85 |
| 52. Solve problems | 4.20 | 0.81 | 4.16 | 0.80 | 4.24 | 0.79 | 4.18 | 0.84 | 4.22 | 0.82 |
| 53. Use appropriate form of number | 4.17 | 0.81 | 4.12 | 0.78 | 4.26 | 0.78 | 4.13 | 0.85 | 4.20 | 0.83 |
| 54. Demonstrate charact. of counting #'s | 4.00 | 0.94 | 3.95 | 0.91 | 4.14 | 0.89 | 3.93 | 0.98 | 3.98 | 0.97 |
| 55. Interpret and apply ratio | 4.01 | 0.87 | 3.98 | 0.86 | 4.07 | 0.87 | 3.99 | 0.89 | 4.00 | 0.89 |
| 56. Perform computations | 4.67 | 0.62 | 4.68 | 0.63 | 4.71 | 0.56 | 4.62 | 0.67 | 4.66 | 0.65 |
| 57. Read/interpret various graphs | 4.40 | 0.76 | 4.38 | 0.75 | 4.46 | 0.73 | 4.36 | 0.79 | 4.41 | 0.75 |
| 58. Recognize numerical data | 3.92 | 0.89 | 3.91 | 0.89 | 3.95 | 0.91 | 3.88 | 0.91 | 3.93 | 0.87 |
| 59. Demonstrate ability to analyze | 3.85 | 0.87 | 3.81 | 0.86 | 3.91 | 0.89 | 3.80 | 0.88 | 3.87 | 0.85 |
| † 60. Interpret Mean, Median, Mode | 3.56 | 0.95 | 3.49 | 0.93 | 3.67 | 0.99 | 3.50 | 0.96 | 3.56 | 0.94 |
| † 61. Interpret Range, Variance, S.D. | 3.22 | 0.96 | 3.10 | 0.93 | 3.36 | 1.01 | 3.18 | 0.94 | 3.26 | 0.95 |
| 62. Select sequence of operations | 4.04 | 0.87 | 4.02 | 0.87 | 4.12 | 0.84 | 3.98 | 0.89 | 4.05 | 0.87 |
| † 63. Recognize relationships among variables | 3.20 | 1.07 | 3.13 | 1.05 | 3.32 | 1.07 | 3.12 | 1.08 | 3.22 | 1.05 |
| 64. Solve simple equations | 4.14 | 0.98 | 4.09 | 0.98 | 4.23 | 0.96 | 4.13 | 0.98 | 4.11 | 0.99 |







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| | TOTAL | | FAR WEST | | SOUTHERN | | CENTRAL | | NORTHEAST | |
|---|---|---|---|---|---|---|---|---|---|---|
| III. MATHEMATICS (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| † 65. Write equations using variables | 3.51 | 1.05 | 3.46 | 1.07 | 3.61 | 1.05 | 3.42 | 1.03 | 3.53 | 1.03 |
| † 66. Recognize patterns | 3.36 | 1.04 | 3.31 | 1.03 | 3.45 | 1.06 | 3.28 | 1.04 | 3.38 | 1.03 |
| † 67. Use formulas for determining length | 3.52 | 1.07 | 3.46 | 1.06 | 3.63 | 1.10 | 3.46 | 1.08 | 3.54 | 1.01 |
| 68. Use various systems of measurement | 3.65 | 1.04 | 3.64 | 1.04 | 3.75 | 1.06 | 3.56 | 1.05 | 3.64 | 1.02 |
| 69. Convert units - measurement system | 3.57 | 1.06 | 3.53 | 1.07 | 3.66 | 1.07 | 3.50 | 1.04 | 3.60 | 1.03 |
| 70. Interpret logical connectives | 3.67 | 0.98 | 3.59 | 1.00 | 3.77 | 0.97 | 3.59 | 0.96 | 3.75 | 0.96 |
| 71. Use deductive/inductive reasoning | 3.75 | 0.96 | 3.69 | 0.97 | 3.81 | 0.97 | 3.65 | 0.97 | 3.84 | 0.91 |
| 72. Draw correct conclusions | 3.62 | 1.01 | 3.58 | 0.99 | 3.69 | 1.01 | 3.53 | 1.05 | 3.68 | 0.97 |
| 73. Demonstrate ways to find answers | 3.98 | 0.90 | 3.99 | 0.88 | 4.01 | 0.90 | 3.90 | 0.94 | 4.02 | 0.87 |
| 74. Demonstrate fundamental algorithms | 3.66 | 1.07 | 3.62 | 1.11 | 3.79 | 1.03 | 3.56 | 1.09 | 3.66 | 1.04 |
| † 75. Use examples from history of math | 2.72 | 1.04 | 2.67 | 1.00 | 2.90 | 1.09 | 2.63 | 1.06 | 2.70 | 1.00 |
| 76. Express key concept of math | 4.08 | 1.00 | 4.08 | 1.00 | 4.16 | 0.97 | 4.01 | 1.03 | 4.04 | 0.99 |
| 77. Use calculator as tool | 4.09 | 0.96 | 4.09 | 0.94 | 4.08 | 0.99 | 4.13 | 0.95 | 4.06 | 0.96 |
| 78. Use a variety of materials | 3.76 | 1.14 | 3.75 | 1.12 | 3.82 | 1.14 | 3.68 | 1.17 | 3.81 | 1.14 |
| IV. LISTENING | | | | | | | | | | |
| 79. Recall actual wording of message | 3.62 | 1.08 | 3.55 | 1.09 | 3.66 | 1.08 | 3.62 | 1.06 | 3.65 | 1.08 |
| 80. Recall & paraphrase spoken message | 4.35 | 0.75 | 4.37 | 0.71 | 4.31 | 0.80 | 4.32 | 0.76 | 4.41 | 0.72 |
| 81. Select info. in a spoken message | 4.29 | 0.74 | 4.25 | 0.75 | 4.30 | 0.70 | 4.23 | 0.78 | 4.37 | 0.68 |
| 82. Recognize a speaker's question | 4.59 | 0.62 | 4.59 | 0.61 | 4.62 | 0.60 | 4.53 | 0.68 | 4.65 | 0.56 |
| 83. Understand implied cont. in message | 4.13 | 0.76 | 4.12 | 0.76 | 4.18 | 0.73 | 4.05 | 0.81 | 4.19 | 0.72 |
| 84. Understand meaning of fig. of speech | 3.96 | 0.85 | 3.90 | 0.85 | 4.04 | 0.84 | 3.90 | 0.86 | 4.03 | 0.84 |
| 85. Interpret purp. of rhetorical device | 3.70 | 0.89 | 3.63 | 0.91 | 3.72 | 0.89 | 3.66 | 0.92 | 3.80 | 0.83 |
| 86. Recognize organiz.-spoken message | 3.76 | 0.91 | 3.69 | 0.92 | 3.77 | 0.90 | 3.71 | 0.92 | 3.89 | 0.87 |

| | TOTAL | | FAR WEST | | SOUTHERN | | CENTRAL | | NORTHEAST | |
|---|---|---|---|---|---|---|---|---|---|---|
| IV. LISTENING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 87. Ident. main idea of message-directly | 4.63 | 0.62 | 4.61 | 0.60 | 4.64 | 0.61 | 4.63 | 0.63 | 4.66 | 0.65 |
| 88. Ident. main idea of mess-inferable | 4.27 | 0.74 | 4.25 | 0.74 | 4.29 | 0.71 | 4.23 | 0.78 | 4.33 | 0.74 |
| 89. Identify a speaker's purpose | 4.31 | 0.76 | 4.26 | 0.79 | 4.33 | 0.76 | 4.30 | 0.79 | 4.38 | 0.71 |
| 90. Recognize strength/weakness in logic | 3.96 | 0.80 | 3.93 | 0.82 | 3.92 | 0.79 | 3.87 | 0.81 | 4.10 | 0.76 |
| 91. Determine facts presented are relev. | 4.05 | 0.79 | 4.05 | 0.81 | 4.03 | 0.81 | 3.96 | 0.80 | 4.17 | 0.73 |
| 92. Determine statements are fact/opinion | 4.12 | 0.80 | 4.12 | 0.83 | 4.13 | 0.79 | 4.03 | 0.83 | 4.20 | 0.74 |
| 93. Identify basis of logical argument | 4.37 | 0.74 | 4.37 | 0.74 | 4.39 | 0.72 | 4.30 | 0.78 | 4.45 | 0.70 |
| 94. Identify assumption of log. argument | 3.86 | 0.83 | 3.85 | 0.85 | 3.82 | 0.82 | 3.78 | 0.85 | 3.99 | 0.79 |
| 95. Identify affective/emotional content | 3.81 | 0.86 | 3.78 | 0.87 | 3.79 | 0.88 | 3.76 | 0.85 | 3.90 | 0.84 |
| 96. Focus on a spoken message | 3.91 | 0.91 | 3.88 | 0.95 | 3.92 | 0.89 | 3.87 | 0.91 | 3.96 | 0.88 |
| 97. Understand oral instructions given | 4.59 | 0.63 | 4.55 | 0.64 | 4.64 | 0.57 | 4.55 | 0.67 | 4.64 | 0.62 |
| 98. Use cues such as pitch | 4.18 | 0.81 | 4.13 | 0.82 | 4.18 | 0.82 | 4.22 | 0.78 | 4.18 | 0.82 |
| 99. Recognize dialects of spoken English | 3.72 | 0.97 | 3.67 | 1.00 | 3.84 | 0.94 | 3.66 | 0.96 | 3.73 | 0.96 |
| † 100. Understand spoken English dialects | 3.47 | 0.96 | 3.38 | 0.97 | 3.64 | 0.94 | 3.38 | 0.95 | 3.50 | 0.97 |
| V. SPEAKING | | | | | | | | | | |
| 101. Enunciate words | 4.64 | 0.60 | 4.61 | 0.64 | 4.70 | 0.55 | 4.61 | 0.62 | 4.67 | 0.57 |
| 102. Speak in a fluent manner | 4.44 | 0.71 | 4.39 | 0.74 | 4.53 | 0.65 | 4.38 | 0.75 | 4.46 | 0.69 |
| 103. Speak at rate to be understood | 4.61 | 0.59 | 4.58 | 0.61 | 4.65 | 0.56 | 4.59 | 0.62 | 4.63 | 0.58 |
| 104. Speak loudly to be heard | 4.67 | 0.57 | 4.64 | 0.58 | 4.69 | 0.55 | 4.67 | 0.59 | 4.69 | 0.54 |
| 105. Use tone of voice to convey message | 4.39 | 0.71 | 4.38 | 0.72 | 4.44 | 0.67 | 4.37 | 0.72 | 4.40 | 0.70 |
| 106. Place stress appropriately | 4.42 | 0.69 | 4.39 | 0.72 | 4.44 | 0.67 | 4.42 | 0.71 | 4.43 | 0.68 |
| 107. Use eye contact | 4.53 | 0.67 | 4.53 | 0.69 | 4.56 | 0.64 | 4.53 | 0.68 | 4.52 | 0.69 |
| 108. Use grammatical structure correctly | 4.59 | 0.64 | 4.52 | 0.66 | 4.71 | 0.53 | 4.53 | 0.68 | 4.62 | 0.64 |

| | TOTAL | | FAR WEST | | SOUTHERN | | CENTRAL | | NORTHEAST | |
|---|---|---|---|---|---|---|---|---|---|---|
| V. SPEAKING (cont.) | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 109. Adjust grammatical complexity | 4.40 | 0.76 | 4.37 | 0.75 | 4.48 | 0.71 | 4.32 | 0.81 | 4.44 | 0.76 |
| 110. Demonstrate basic working vocabulary | 4.54 | 0.64 | 4.50 | 0.64 | 4.60 | 0.61 | 4.50 | 0.66 | 4.57 | 0.63 |
| 111. Recognize message not understood | 4.64 | 0.59 | 4.67 | 0.55 | 4.64 | 0.59 | 4.58 | 0.62 | 4.67 | 0.58 |
| 112. Supply synonym for a word | 4.53 | 0.65 | 4.54 | 0.64 | 4.57 | 0.64 | 4.47 | 0.67 | 4.56 | 0.64 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.66 | 4.50 | 0.65 | 4.53 | 0.65 | 4.42 | 0.71 | 4.53 | 0.65 |
| 114. Adjust to unexpected change | 4.19 | 0.79 | 4.17 | 0.80 | 4.25 | 0.78 | 4.14 | 0.80 | 4.22 | 0.78 |
| 115. Use spoken lang. for variety of purp. | 4.49 | 0.67 | 4.46 | 0.67 | 4.54 | 0.65 | 4.45 | 0.71 | 4.51 | 0.64 |
| 116. Speak concisely and to the point | 4.53 | 0.63 | 4.49 | 0.66 | 4.59 | 0.61 | 4.49 | 0.64 | 4.57 | 0.58 |
| 117. Read aloud with intonation | 4.38 | 0.73 | 4.31 | 0.79 | 4.47 | 0.67 | 4.36 | 0.72 | 4.39 | 0.72 |
| VI. INTERACTIVE COMMUNICATION SKILLS | | | | | | | | | | |
| 118. Get a listener's attention | 4.57 | 0.63 | 4.55 | 0.63 | 4.63 | 0.60 | 4.54 | 0.63 | 4.58 | 0.66 |
| 119. Give verbal/non-verbal feedback | 4.26 | 0.76 | 4.25 | 0.77 | 4.31 | 0.74 | 4.23 | 0.75 | 4.23 | 0.78 |
| 120. Exercise good judgment-oral interaction | 4.32 | 0.72 | 4.31 | 0.73 | 4.37 | 0.71 | 4.29 | 0.72 | 4.33 | 0.72 |
| 121. Direct verbal interaction | 4.19 | 0.76 | 4.16 | 0.77 | 4.25 | 0.77 | 4.13 | 0.76 | 4.22 | 0.75 |
| 122. Adapt to a variety of comm. situations | 4.25 | 0.75 | 4.34 | 2.35 | 4.25 | 0.72 | 4.20 | 0.77 | 4.21 | 0.76 |
| 123. Request clarification of spoken mess. | 4.43 | 0.69 | 4.52 | 1.21 | 4.41 | 0.70 | 4.37 | 0.72 | 4.41 | 0.68 |
| 124. Be aware of listener's non-verbal cues | 4.26 | 0.74 | 4.29 | 1.05 | 4.28 | 0.71 | 4.21 | 0.78 | 4.25 | 0.70 |
| 125. Be aware of one own non-verbal cues | 4.32 | 0.73 | 4.35 | 1.04 | 4.34 | 0.70 | 4.28 | 0.77 | 4.32 | 0.72 |
| 126. Respond to listener's signs | 4.49 | 0.66 | 4.51 | 0.95 | 4.53 | 0.62 | 4.44 | 0.70 | 4.48 | 0.65 |
| 127. Match spoken mess. to audience level | 4.41 | 0.69 | 4.47 | 0.95 | 4.46 | 0.66 | 4.34 | 0.74 | 4.39 | 0.70 |
| 128. Refrain from interruptions | 4.31 | 0.74 | 4.32 | 0.71 | 4.29 | 0.78 | 4.26 | 0.76 | 4.35 | 0.70 |
| 129. Listen to speaker and summarize ideas | 4.27 | 0.74 | 4.23 | 0.76 | 4.32 | 0.71 | 4.24 | 0.76 | 4.28 | 0.72 |
| 130. Listen to two speakers and compare | 3.98 | 0.84 | 3.95 | 0.83 | 4.03 | 0.84 | 3.92 | 0.86 | 4.02 | 0.83 |

| VI. INTERACTIVE COMMUNICATION SKILLS (cont.) | TOTAL | | FAR WEST | | SOUTHERN | | CENTRAL | | NORTHEAST | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 131. Listen to someone describe situation | 3.78 | 0.87 | 3.71 | 0.88 | 3.84 | 0.87 | 3.73 | 0.88 | 3.85 | 0.85 |
| 132. Obtain information from diff. resources | 4.14 | 0.81 | 4.10 | 0.82 | 4.12 | 0.80 | 4.09 | 0.86 | 4.26 | 0.75 |
| 133. Listen to a disc. and evaluate logic | 4.25 | 0.76 | 4.25 | 0.77 | 4.28 | 0.74 | 4.16 | 0.83 | 4.33 | 0.69 |
| 134. Observe/describe an incident | 4.00 | 0.83 | 3.97 | 0.85 | 4.01 | 0.82 | 3.97 | 0.84 | 4.07 | 0.81 |

Appendix Q

Supplementary Teacher Respondents: Results of Frequency and Mean Analyses

| | SUPPLEMENTARY TEACHER RESPONDENTS N=238 | | | |
|---|---|---|---|---|
| | L/N[a] | V/E[b] | Mean | S.D. |
| I. READING | | | | |
| 1. Determine main idea | 0 | 95 | 4.67 | 0.58 |
| 2. Locate important ideas | 0 | 94 | 4.55 | 0.62 |
| 3. Identify accurate paraphrases | 2 | 85 | 4.28 | 0.78 |
| 4. Determine supporting ideas | 2 | 85 | 4.34 | 0.80 |
| 5. Recognize an argument | 2 | 74 | 4.11 | 0.84 |
| 6. Determine facts/ideas | 2 | 74 | 4.13 | 0.85 |
| 7. Identify strength/weakness | 6 | 68 | 3.91 | 0.87 |
| 8. Recognize techniques | 6 | 59 | 3.78 | 0.92 |
| 9. Recognize elements | 4 | 73 | 3.98 | 0.84 |
| 10. Identify logical assumptions | 6 | 65 | 3.81 | 0.87 |
| 11. Recognize point of view | 4 | 73 | 3.99 | 0.83 |
| 12. Perceive what is implied | 3 | 71 | 3.98 | 0.83 |
| 13. Recognize attitude expressed | 4 | 66 | 3.83 | 0.83 |
| 14. Recognize style | 9 | 52 | 3.56 | 0.88 |
| 15. Distinguish facts/opinion | 3 | 77 | 4.22 | 0.88 |
| 16. Recognize ideas/situations | 9 | 65 | 3.78 | 0.88 |
| 17. Determine author's purpose | 6 | 61 | 3.78 | 0.92 |
| 18. Understand reading selections | 4 | 74 | 4.03 | 0.84 |
| 19. Use table of contents | 0 | 95 | 4.70 | 0.57 |
| 20. Arrange ideas in reading selection | 5 | 73 | 4.08 | 0.91 |
| 21. Identify relationships | 3 | 81 | 4.18 | 0.79 |
| 22. Determine implied relationships | 4 | 76 | 4.05 | 0.83 |
| 23. Locate place in reading selection | 6 | 71 | 4.09 | 0.97 |
| 24. Recognize different interpretations | 3 | 76 | 4.09 | 0.81 |
| 25. Identify what author assumes | 7 | 65 | 3.78 | 0.88 |
| 26. Recognize meaning of word | 3 | 82 | 4.21 | 0.81 |

[a]L/N = of little or no importance
[b]V/E = very or extremely important
*L/N > 20%
†Mean of less than 3.50

Q2

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| | SUPPLEMENTARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| I. READING (cont'd) | | | | |
| 27. Determine meaning of figuration | 4 | 73 | 3.97 | 0.84 |
| 28. Understand function-key transit. | 2 | 72 | 4.01 | 0.81 |
| 29. Compare/combine ideas | 2 | 76 | 4.01 | 0.76 |
| 30. Identify inconsistencies | 6 | 71 | 3.95 | 0.87 |
| 31. Specify appropriate reference source | 0 | 90 | 4.48 | 0.69 |
| 32. Understand reading materials | 1 | 78 | 4.11 | 0.77 |
| II. WRITING | | | | |
| 33. Describe an event/situation | 0 | 91 | 4.45 | 0.65 |
| 34. Delineate steps in a process | 0 | 94 | 4.52 | 0.63 |
| 35. Support a position | 2 | 84 | 4.23 | 0.76 |
| 36. Analyze ideas | 1 | 87 | 4.34 | 0.72 |
| 37. Provide a clear focus | 1 | 86 | 4.26 | 0.74 |
| 38. Produce/develop supp. materials | 1 | 83 | 4.22 | 0.75 |
| 39. Organize ideas | 0 | 93 | 4.52 | 0.64 |
| 40. Use vocabulary appropriatly | 0 | 94 | 4.53 | 0.62 |
| 41. Present ideas in writing | 6 | 66 | 3.84 | 0.88 |
| 42. Present alternative points | 3 | 69 | 3.92 | 0.82 |
| 43. Produce writing free of errors | 0 | 90 | 4.49 | 0.69 |
| 44. Recognize basic grammatical errors | 0 | 95 | 4.67 | 0.58 |
| 45. Recognize effective sentence structure | 2 | 85 | 4.32 | 0.78 |
| 46. Recognize inappropriate language | 1 | 84 | 4.27 | 0.77 |
| 47. Revise sentences | 0 | 95 | 4.63 | 0.59 |
| 48. Revise paragraphs to create | 1 | 88 | 4.33 | 0.70 |
| 49. Revise paragraphs to clarify | 2 | 86 | 4.29 | 0.74 |

| | SUPPLEMENTARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| **III. MATHEMATICS** | | | | |
| 50. Recognize position of numbers | 3 | 80 | 4.27 | 0.89 |
| 51. Recognize equivalent forms | 2 | 77 | 4.21 | 0.88 |
| 52. Solve problems | 4 | 78 | 4.10 | 0.86 |
| 53. Use appropriate form of number | 2 | 80 | 4.19 | 0.82 |
| 54. Demonstrate charact. of counting #'s | 4 | 75 | 4.13 | 0.90 |
| 55. Interpret and apply ratio | 5 | 75 | 4.00 | 0.86 |
| 56. Perform computations | 1 | 94 | 4.60 | 0.62 |
| 57. Read/interpret various graphs | 2 | 83 | 4.28 | 0.81 |
| 58. Recognize numerical data | 8 | 67 | 3.81 | 0.90 |
| 59. Demonstrate ability to analyze | 6 | 68 | 3.86 | 0.88 |
| 60. Interpret Mean, Median, Mode | 10 | 58 | 3.65 | 0.93 |
| † 61. Interpret Range, Variance, S.D. | 17 | 47 | 3.39 | 1.00 |
| 62. Select sequence of operations | 4 | 72 | 3.97 | 0.89 |
| †* 63. Recognize relationships among variables | 21 | 40 | 3.28 | 1.11 |
| 64. Solve simple equations | 7 | 79 | 4.15 | 0.94 |
| 65. Write equations using variables | 14 | 55 | 3.57 | 1.02 |
| † 66. Recognize patterns | 17 | 50 | 3.49 | 1.06 |
| 67. Use formulas for determining length | 16 | 52 | 3.51 | 1.05 |
| 68. Use various systems of measurement | 15 | 51 | 3.55 | 1.05 |
| 69. Convert units - measurement system | 10 | 57 | 3.66 | 0.95 |
| 70. Interpret logical connectives | 13 | 53 | 3.57 | 1.01 |
| 71. Use deductive/inductive reasoning | 15 | 57 | 3.62 | 1.01 |
| 72. Draw correct conclusions | 16 | 55 | 3.55 | 0.99 |
| 73. Demonstrate ways to find answers | 6 | 71 | 3.94 | 0.92 |
| 74. Demonstrate fundamental algorithms | 9 | 67 | 3.84 | 0.99 |
| †* 75. Use examples from history of math | 36 | 28 | 2.91 | 1.12 |

| | SUPPLEMENTARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| III. MATHEMATICS (cont'd) | | | | |
| 76. Express key concept of math | 7 | 72 | 3.99 | 0.98 |
| 77. Use calculator as tool | 7 | 66 | 3.92 | 0.98 |
| 78. Use a variety of materials | 9 | 70 | 4.00 | 1.04 |
| VI. LISTENING | | | | |
| 79. Recall actual wording of message | 11 | 61 | 3.76 | 1.02 |
| 80. Recall & paraphrase spoken message | 3 | 84 | 4.19 | 0.81 |
| 81. Select info. in a spoken message | 3 | 85 | 4.22 | 0.76 |
| 82. Recognize a speaker's question | 0 | 89 | 4.43 | 0.70 |
| 83. Understand implied cont. in message | 2 | 80 | 4.16 | 0.79 |
| 84. Understand meaning of fig. of speech | 6 | 69 | 3.94 | 0.90 |
| 85. Interpret purp. of rhetorical device | 11 | 61 | 3.69 | 0.91 |
| 86. Recognize organiz.-spoken message | 6 | 70 | 3.89 | 0.89 |
| 87. Ident. main idea of message-directly | 1 | 91 | 4.52 | 0.69 |
| 88. Ident. main idea of mess-inferable | 2 | 84 | 4.20 | 0.75 |
| 89. Identify a speaker's purpose | 3 | 82 | 4.22 | 0.81 |
| 90. Recognize strength/weakness in logic | 6 | 66 | 3.78 | 0.84 |
| 91. Determine facts presented are relev. | 4 | 73 | 3.97 | 0.82 |
| 92. Determine statements are fact/opinion | 6 | 77 | 4.06 | 0.88 |
| 93. Identify basis of logical argument | 3 | 82 | 4.23 | 0.81 |
| 94. Identify assumption of log. argument | 6 | 68 | 3.83 | 0.87 |
| 95. Identify affective/emotional content | 8 | 62 | 3.71 | 0.88 |
| 96. Focus on a spoken message | 9 | 66 | 3.84 | 1.02 |
| 97. Understand oral instructions given | 1 | 90 | 4.48 | 0.71 |
| 98. Use cues such as pitch | 4 | 79 | 4.12 | 0.83 |
| 99. Recognize dialects of spoken English | 7 | 68 | 3.89 | 0.94 |
| 100. Understand spoken English dialects | 11 | 63 | 3.75 | 1.00 |

| | SUPPLEMENTARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| **V. SPEAKING** | | | | |
| 101. Enunciate words | 0 | 92 | 4.50 | 0.66 |
| 102. Speak in a fluent manner | 1 | 87 | 4.34 | 0.74 |
| 103. Speak at rate to be understood | 1 | 92 | 4.47 | 0.66 |
| 104. Speak loudly to be heard | 1 | 94 | 4.55 | 0.65 |
| 105. Use tone of voice to convey message | 2 | 87 | 4.34 | 0.74 |
| 106. Place stress appropriately | 2 | 85 | 4.30 | 0.76 |
| 107. Use eye contact | 2 | 91 | 4.44 | 0.71 |
| 108. Use grammatical structure correctly | 0 | 94 | 4.56 | 0.63 |
| 109. Adjust grammatical complexity | 3 | 88 | 4.36 | 0.80 |
| 110. Demonstrate basic working vocabulary | 1 | 93 | 4.44 | 0.67 |
| 111. Recognize message not understood | 0 | 94 | 4.53 | 0.63 |
| 112. Supply synonym for a word | 1 | 90 | 4.38 | 0.70 |
| 113. Adapt vocabulary and style of lang. | 2 | 94 | 4.49 | 0.68 |
| 114. Adjust to unexpected change | 3 | 85 | 4.22 | 0.79 |
| 115. Use spoken lang. for variety of purp. | 1 | 91 | 4.43 | 0.69 |
| 116. Speak concisely and to the point | 1 | 91 | 4.44 | 0.69 |
| 117. Read aloud with intonation | 2 | 89 | 4.39 | 0.75 |
| **VI. INTERACTIVE COMMUNICATION SKILLS** | | | | |
| 118. Get a listener's attention | 0 | 91 | 4.52 | 0.67 |
| 119. Give verbal/non-verbal feedback | 1 | 86 | 4.25 | 0.72 |
| 120. Exercise gd. judgment-oral interaction | 1 | 89 | 4.28 | 0.68 |
| 121. Direct verbal interaction | 2 | 79 | 4.12 | 0.77 |
| 122. Adapt to a variety of comm. situations | 0 | 83 | 4.19 | 0.72 |
| 123. Request clarification of spoken mess. | 1 | 91 | 4.40 | 0.68 |
| 124. Be aware of listener's non-verbal cues | 1 | 81 | 4.16 | 0.77 |
| 125. Be aware of one own non-verbal cues | 0 | 85 | 4.28 | 0.72 |

| | SUPPLEMENTARY TEACHER RESPONDENTS | | | |
|---|---|---|---|---|
| | L/N | V/E | Mean | S.D. |
| **VI. INTERACTIVE COMMUNICATION SKILLS (cont'd)** | | | | |
| 126. Respond to listener's signs | 0 | 91 | 4.39 | 0.66 |
| 127. Match spoken mess. to audience level | 1 | 90 | 4.32 | 0.69 |
| 128. Refrain from interruptions | 1 | 86 | 4.29 | 0.75 |
| 129. Listen to speaker and summarize ideas | 2 | 86 | 4.22 | 0.72 |
| 130. Listen to two speakers and compare | 5 | 72 | 3.95 | 0.88 |
| 131. Listen to someone describe situation | 8 | 67 | 3.79 | 0.86 |
| 132. Obtain information from diff. resources | 3 | 74 | 4.00 | 0.81 |
| 133. Listen to a disc. and evaluate 'ogic | 2 | 81 | 4.14 | 0.78 |
| 134. Observe/describe an incident | 6 | 71 | 3.92 | 0.84 |

Appendix R

Supplementary Teacher Respondents: Mean Ratings by Race/Ethnicity

| | TOTAL N=238 | | BLACK N=114 | | HISPANIC N=122 | |
|---|---|---|---|---|---|---|
| I. READING | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 1. Determine main idea | 4.67 | 0.58 | 4.67 | 0.57 | 4.67 | 0.58 |
| 2. Locate important ideas | 4.55 | 0.62 | 4.53 | 0.63 | 4.56 | 0.61 |
| 3. Identify accurate paraphrases | 4.28 | 0.78 | 4.37 | 0.71 | 4.20 | 0.84 |
| 4. Determine supporting ideas | 4.34 | 0.80 | 4.33 | 0.80 | 4.34 | 0.80 |
| 5. Recognize an argument | 4.11 | 0.84 | 4.09 | 0.86 | 4.13 | 0.82 |
| 6. Determine facts/ideas | 4.13 | 0.84 | 4.12 | 0.82 | 4.14 | 0.85 |
| 7. Identify strength/weakness | 3.91 | 0.87 | 3.96 | 0.84 | 3.85 | 0.89 |
| 8. Recognize techniques | 3.78 | 0.92 | 3.78 | 0.89 | 3.78 | 0.94 |
| 9. Recognize elements | 3.98 | 0.84 | 3.90 | 0.86 | 4.06 | 0.81 |
| 10. Identify logical assumptions | 3.81 | 0.87 | 3.81 | 0.89 | 3.80 | 0.84 |
| 11. Recognize point of view | 3.99 | 0.83 | 3.91 | 0.86 | 4.07 | 0.80 |
| 12. Perceive what is implied | 3.98 | 0.83 | 4.01 | 0.81 | 3.96 | 0.86 |
| 13. Recognize attitude expressed | 3.83 | 0.83 | 3.86 | 0.82 | 3.81 | 0.85 |
| 14. Recognize style | 3.56 | 0.88 | 3.52 | 0.95 | 3.60 | 0.81 |
| 15. Distinguish facts/opinion | 4.22 | 0.88 | 4.27 | 0.80 | 4.18 | 0.94 |
| 16. Recognize ideas/situations | 3.78 | 0.88 | 3.71 | 0.85 | 3.85 | 0.91 |
| 17. Determine author's purpose | 3.78 | 0.92 | 3.71 | 0.92 | 3.85 | 0.92 |
| 18. Understand reading selections | 4.03 | 0.84 | 4.03 | 0.87 | 4.03 | 0.82 |
| 19. Use table of contents | 4.70 | 0.57 | 4.74 | 0.50 | 4.65 | 0.63 |
| 20. Arrange ideas in reading selection | 4.08 | 0.91 | 4.15 | 0.80 | 4.01 | 0.99 |
| 21. Identify relationships | 4.18 | 0.79 | 4.19 | 0.80 | 4.17 | 0.79 |
| 22. Determine implied relationships | 4.05 | 0.83 | 3.99 | 0.83 | 4.11 | 0.84 |
| 23. Locate place in reading selection | 4.09 | 0.97 | 4.09 | 0.97 | 4.08 | 0.97 |
| 24. Recognize different interpretations | 4.09 | 0.81 | 4.14 | 0.82 | 4.04 | 0.80 |
| 25. Identify what author assumes | 3.78 | 0.88 | 3.77 | 0.89 | 3.79 | 0.87 |
| 26. Recognize meaning of word | 4.21 | 0.81 | 4.24 | 0.79 | 4.18 | 0.83 |

†Mean of less than 3.50 for one or more respondent subgroups



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| | TOTAL | | BLACK | | HISPANIC | |
|---|---|---|---|---|---|---|
| I. READING (cont'd) | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 27. Determine meaning of figuration | 3.97 | 0.84 | 3.90 | 0.86 | 4.03 | 0.81 |
| 28. Understand function-key transit. | 4.01 | 0.81 | 4.00 | 0.80 | 4.03 | 0.83 |
| 29. Compare/combine ideas | 4.01 | 0.76 | 3.97 | 0.77 | 4.05 | 0.74 |
| 30. Identify inconsistencies | 3.95 | 0.87 | 3.93 | 0.81 | 3.98 | 0.92 |
| 31. Specify appropriate reference source | 4.48 | 0.69 | 4.54 | 0.66 | 4.43 | 0.72 |
| 32. Understand reading materials | 4.11 | 0.77 | 4.09 | 0.71 | 4.12 | 0.82 |
| II. WRITING | | | | | | |
| 33. Describe an event/situation | 4.45 | 0.65 | 4.41 | 0.64 | 4.48 | 0.67 |
| 34. Delineate steps in a process | 4.52 | 0.63 | 4.47 | 0.67 | 4.57 | 0.59 |
| 35. Support a position | 4.23 | 0.76 | 4.17 | 0.73 | 4.30 | 0.78 |
| 36. Analyze ideas | 4.34 | 0.72 | 4.25 | 0.75 | 4.42 | 0.68 |
| 37. Provide a clear focus | 4.26 | 0.74 | 4.21 | 0.73 | 4.31 | 0.75 |
| 38. Produce/develop supp. materials | 4.22 | 0.75 | 4.25 | 0.74 | 4.19 | 0.75 |
| 39. Organize ideas | 4.52 | 0.64 | 4.49 | 0.66 | 4.55 | 0.62 |
| 40. Use vocabulary appropriatly | 4.53 | 0.62 | 4.48 | 0.61 | 4.57 | 0.62 |
| 41. Present ideas in writing | 3.84 | 0.88 | 3.83 | 0.89 | 3.85 | 0.87 |
| 42. Present alternative points | 3.92 | 0.82 | 3.87 | 0.79 | 3.96 | 0.84 |
| 43. Produce writing free of errors | 4.49 | 0.69 | 4.54 | 0.67 | 4.44 | 0.71 |
| 44. Recognize basic grammatical errors | 4.67 | 0.58 | 4.67 | 0.59 | 4.68 | 0.57 |
| 45. Recognize effective sentence structure | 4.32 | 0.78 | 4.40 | 0.74 | 4.23 | 0.80 |
| 46. Recognize inappropriate language | 4.27 | 0.77 | 4.25 | 0.83 | 4.28 | 0.72 |
| 47. Revise sentences | 4.63 | 0.59 | 4.58 | 0.64 | 4.67 | 0.54 |
| 48. Revise paragraphs to create | 4.33 | 0.70 | 4.30 | 0.73 | 4.35 | 0.67 |
| 49. Revise paragraphs to clarify | 4.29 | 0.74 | 4.27 | 0.79 | 4.31 | 0.69 |

| | | TOTAL | | BLACK | | HISPANIC | |
|---|---|---|---|---|---|---|---|
| III. | MATHEMATICS | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| | 50. Recognize position of numbers | 4.27 | 0.89 | 4.25 | 0.89 | 4.30 | 0.90 |
| | 51. Recognize equivalent forms | 4.21 | 0.88 | 4.18 | 0.91 | 4.25 | 0.85 |
| | 52. Solve problems | 4.10 | 0.86 | 4.07 | 0.80 | 4.12 | 0.92 |
| | 53. Use appropriate form of number | 4.19 | 0.82 | 4.19 | 0.82 | 4.19 | 0.82 |
| | 54. Demonstrate charact. of counting #'s | 4.13 | 0.90 | 4.14 | 0.85 | 4.12 | 0.95 |
| | 55. Interpret and apply ratio | 4.00 | 0.86 | 3.97 | 0.88 | 4.02 | 0.84 |
| | 56. Perform computations | 4.60 | 0.62 | 4.55 | 0.65 | 4.64 | 0.59 |
| | 57. Read/Interpret various graphs | 4.28 | 0.81 | 4.27 | 0.82 | 4.29 | 0.80 |
| | 58. Recognize numerical data | 3.81 | 0.90 | 3.81 | 0.89 | 3.81 | 0.90 |
| | 59. Demonstrate ability to analyze | 3.86 | 0.88 | 3.88 | 0.91 | 3.83 | 0.85 |
| | 60. Interpret Mean, Median, Mode | 3.65 | 0.93 | 3.61 | 0.96 | 3.68 | 0.91 |
| † | 61. Interpret Range, Variance, S.D. | 3.39 | 1.00 | 3.37 | 0.99 | 3.41 | 1.01 |
| | 62. Select sequence of operations | 3.97 | 0.89 | 3.95 | 0.92 | 4.00 | 0.87 |
| † | 63. Recognize relationships among variables | 3.28 | 1.11 | 3.26 | 1.10 | 3.29 | 1.11 |
| | 64. Solve simple equations | 4.15 | 0.94 | 4.07 | 0.96 | 4.22 | 0.92 |
| | 65. Write equations using variables | 3.57 | 1.02 | 3.53 | 1.05 | 3.60 | 0.98 |
| † | 66. Recognize patterns | 3.49 | 1.06 | 3.45 | 1.07 | 3.53 | 1.06 |
| | 67. Use formulas for determining length | 3.51 | 1.05 | 3.50 | 1.00 | 3.52 | 1.09 |
| † | 68. Use various systems of measurement | 3.55 | 1.05 | 3.64 | 0.97 | 3.47 | 1.11 |
| | 69. Convert units - measurement system | 3.66 | 0.95 | 3.67 | 0.91 | 3.66 | 1.00 |
| † | 70. Interpret logical connectives | 3.57 | 1.01 | 3.48 | 1.01 | 3.65 | 1.00 |
| | 71. Use deductive/inductive reasoning | 3.62 | 1.01 | 3.52 | 1.04 | 3.70 | 0.97 |
| † | 72. Draw correct conclusions | 3.55 | 0.99 | 3.49 | 1.05 | 3.61 | 0.93 |
| | 73. Demonstrate ways to find answers | 3.94 | 0.92 | 3.86 | 0.95 | 4.02 | 0.88 |
| | 74. Demonstrate fundamental algorithms | 3.84 | 0.99 | 3.80 | 1.01 | 3.88 | 0.98 |
| † | 75. Use examples from history of math | 2.91 | 1.12 | 3.02 | 1.13 | 2.82 | 1.10 |

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| | TOTAL | | BLACK | | HISPANIC | |
|---|---|---|---|---|---|---|
| III. MATHEMATICS (cont'd) | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 76. Express key concept of math | 3.99 | 0.98 | 3.92 | 1.02 | 4.06 | 0.93 |
| 77. Use calculator as tool | 3.92 | 0.98 | 3.80 | 1.05 | 4.02 | 0.90 |
| 78. Use a variety of materials | 4.00 | 1.04 | 3.91 | 1.07 | 4.07 | 1.02 |
| VI. LISTENING | | | | | | |
| 79. Recall actual wording of message | 3.76 | 1.02 | 3.73 | 0.95 | 3.79 | 1.08 |
| 80. Recall + paraphrase spoken message | 4.19 | 0.81 | 4.15 | 0.77 | 4.23 | 0.85 |
| 81. Select info. in a spoken message | 4.22 | 0.76 | 4.11 | 0.82 | 4.33 | 0.69 |
| 82. Recognize a speaker's question | 4.43 | 0.70 | 4.35 | 0.77 | 4.50 | 0.62 |
| 83. Understand implied cont. in message | 4.16 | 0.79 | 4.13 | 0.84 | 4.18 | 0.74 |
| 84. Understand meaning of fig. of speech | 3.94 | 0.90 | 3.97 | 0.93 | 3.91 | 0.87 |
| 85. Interpret purp. of rhetorical device | 3.69 | 0.91 | 3.68 | 0.93 | 3.69 | 0.90 |
| 86. Recognize organiz.-spoken message | 3.89 | 0.89 | 3.84 | 0.90 | 3.93 | 0.88 |
| 87. Ident. main idea of message-directly | 4.52 | 0.69 | 4.37 | 0.78 | 4.65 | 0.56 |
| 88. Ident. main idea of mess-inferable | 4.20 | 0.75 | 4.13 | 0.81 | 4.27 | 0.68 |
| 89. Identify a speaker's purpose | 4.22 | 0.81 | 4.12 | 0.87 | 4.31 | 0.74 |
| 90. Recognize strength/weakness in logic | 3.78 | 0.84 | 3.70 | 0.83 | 3.85 | 0.85 |
| 91. Determine facts presented are relev. | 3.97 | 0.82 | 3.91 | 0.82 | 4.02 | 0.82 |
| 92. Determine statements are fact/opinion | 4.06 | 0.88 | 3.96 | 0.93 | 4.15 | 0.84 |
| 93. Identify basis of logical argument | 4.23 | 0.81 | 4.18 | 0.84 | 4.28 | 0.78 |
| 94. Identify assumption of log. argument | 3.83 | 0.87 | 3.75 | 0.93 | 3.91 | 0.80 |
| 95. Identify affective/emotional content | 3.71 | 0.88 | 3.57 | 0.93 | 3.85 | 0.81 |
| 96. Focus on a spoken message | 3.84 | 1.02 | 3.78 | 1.01 | 3.90 | 1.03 |
| 97. Understand oral instructions given | 4.48 | 0.71 | 4.46 | 0.67 | 4.49 | 0.75 |
| 98. Use cues such as pitch | 4.12 | 0.83 | 4.06 | 0.84 | 4.18 | 0.82 |
| 99. Recognize dialects of spoken English | 3.89 | 0.94 | 3.91 | 0.91 | 3.87 | 0.98 |
| 100. Understand spoken English dialects | 3.75 | 1.00 | 3.80 | 0.99 | 3.70 | 1.02 |

| | TOTAL | | BLACK | | HISPANIC | |
|---|---|---|---|---|---|---|
| V. SPEAKING | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 101. Enunciate words | 4.50 | 0.66 | 4.46 | 0.70 | 4.53 | 0.62 |
| 102. Speak in a fluent manner | 4.34 | 0.74 | 4.40 | 0.75 | 4.29 | 0.72 |
| 103. Speak at rate to be understood | 4.47 | 0.66 | 4.44 | 0.68 | 4.50 | 0.65 |
| 104. Speak loudly to be heard | 4.55 | 0.65 | 4.56 | 0.64 | 4.55 | 0.66 |
| 105. Use tone of voice to convey message | 4.34 | 0.74 | 4.32 | 0.70 | 4.36 | 0.78 |
| 106. Place stress appropriately | 4.30 | 0.76 | 4.35 | 0.71 | 4.24 | 0.80 |
| 107. Use eye contact | 4.44 | 0.71 | 4.42 | 0.73 | 4.46 | 0.70 |
| 108. Use grammatical structure correctly | 4.56 | 0.63 | 4.59 | 0.62 | 4.53 | 0.63 |
| 109. Adjust grammatical complexity | 4.36 | 0.80 | 4.33 | 0.86 | 4.39 | 0.74 |
| 110. Demonstrate basic working vocabulary | 4.44 | 0.67 | 4.43 | 0.69 | 4.44 | 0.66 |
| 111. Recognize message not understood | 4.53 | 0.63 | 4.47 | 0.68 | 4.58 | 0.57 |
| 112. Supply synonym for a word | 4.38 | 0.70 | 4.29 | 0.75 | 4.45 | 0.65 |
| 113. Adapt vocabulary and style of lang. | 4.49 | 0.68 | 4.43 | 0.79 | 4.55 | 0.56 |
| 114. Adjust to unexpected change | 4.22 | 0.79 | 4.20 | 0.85 | 4.25 | 0.73 |
| 115. Use spoken lang. for variety of purp. | 4.43 | 0.69 | 4.35 | 0.73 | 4.50 | 0.65 |
| 116. Speak concisely and to the point | 4.44 | 0.69 | 4.46 | 0.68 | 4.42 | 0.69 |
| 117. Read aloud with intonation | 4.39 | 0.75 | 4.42 | 0.75 | 4.36 | 0.74 |
| VI. INTERACTIVE COMMUNICATION SKILLS | | | | | | |
| 118. Get a listener's attention | 4.52 | 0.67 | 4.55 | 0.66 | 4.48 | 0.68 |
| 119. Give verbal/non-verbal feedback | 4.25 | 0.72 | 4.23 | 0.77 | 4.26 | 0.67 |
| 120. Exercise gd. judgment-oral interaction | 4.28 | 0.68 | 4.29 | 0.69 | 4.28 | 0.67 |
| 121. Direct verbal interaction | 4.12 | 0.77 | 4.09 | 0.74 | 4.15 | 0.81 |
| 122. Adapt to a variety of comm. situations | 4.19 | 0.72 | 4.19 | 0.71 | 4.18 | 0.72 |
| 123. Request clarification of spoken mess. | 4.40 | 0.68 | 4.32 | 0.72 | 4.48 | 0.62 |
| 124. Be aware of listener's non-verbal cues | 4.16 | 0.77 | 4.12 | 0.80 | 4.20 | 0.75 |
| 125. Be aware of one own non-verbal cues | 4.28 | 0.72 | 4.19 | 0.73 | 4.36 | 0.70 |

| VI. INTERACTIVE COMMUNICATION SKILLS (cont'd) | TOTAL | | BLACK | | HISPANIC | |
|---|---|---|---|---|---|---|
| | MEAN | S.D. | MEAN | S.D. | MEAN | S.D. |
| 126. Respond to listener's signs | 4.39 | 0.66 | 4.35 | 0.67 | 4.42 | 0.66 |
| 127. Match spoken mess. to audience level | 4.32 | 0.69 | 4.32 | 0.71 | 4.32 | 0.67 |
| 128. Refrain from interruptions | 4.29 | 0.75 | 4.32 | 0.73 | 4.26 | 0.76 |
| 129. Listen to speaker and summarize ideas | 4.22 | 0.72 | 4.15 | 0.73 | 4.28 | 0.70 |
| 130. Listen to two speakers and compare | 3.95 | 0.88 | 3.89 | 0.85 | 4.00 | 0.90 |
| 131. Listen to someone describe situation | 3.79 | 0.86 | 3.75 | 0.88 | 3.82 | 0.85 |
| 132. Obtain information from diff. resources | 4.00 | 0.81 | 3.95 | 0.83 | 4.05 | 0.79 |
| 133. Listen to a disc. and evaluate logic | 4.14 | 0.78 | 4.12 | 0.82 | 4.15 | 0.75 |
| 134. Observe/describe an incident | 3.92 | 0.84 | 3.85 | 0.85 | 3.98 | 0.83 |